

Fiber Media Converters

MVMC/VMCR 3G FIBER PRODUCTS



Instruction Manual



Affiliate with the N.V. KEMA in The Netherlands



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Certificate Number: 510040.001

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Including its implementation, meets the requirements of the standard:

ISO 9001:2008

Scope:

The design, manufacture and support of video and audio hardware and software products and related systems.

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Grass Valley Web Site

The www.grassvalley.com web site offers the following:

Online User Documentation — Current versions of product catalogs, brochures, data sheets, ordering guides, planning guides, manuals, and release notes in .pdf format can be downloaded.

FAQ Database — Solutions to problems and troubleshooting efforts can be found by searching our Frequently Asked Questions (FAQ) database.

Software Downloads — Download software updates, drivers, and patches.



END-OF-LIFE PRODUCT RECYCLING NOTICE

Grass Valley's innovation and excellence in product design also extends to the programs we've established to manage the recycling of our products. Grass Valley has developed a comprehensive end-of-life product take back program for recycle or disposal of end-of-life products. Our program meets the requirements of the European Union's WEEE Directive, the United States Environmental Protection Agency, and U.S. state and local agencies.

Grass Valley's end-of-life product take back program assures proper disposal by use of Best Available Technology. This program accepts any Grass Valley branded equipment. Upon request, a Certificate of Recycling or a Certificate of Destruction, depending on the ultimate disposition of the product, can be sent to the requester.

Grass Valley will be responsible for all costs associated with recycling and disposal, including freight. However, you are responsible for the removal of the equipment from your facility and packing the equipment to make it ready for pickup.



For further information on the Grass Valley product take back system please contact Grass Valley at + 800 80 80 20 20 or +33 1 48 25 20 20 from most other countries. In the U.S. and Canada please call 800-547-8949, and ask to be connected to the EH&S Department. Additional information concerning the program can be found at: www.grassvalley.com/about/environmental-policy

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Preface

About This Manual

This manual provides safety, regulatory, installation, configuration, and operation instructions for the 3G mini video media converters (MVMCs) and rack mount frame offered by Grass Valley.

All Modular product manuals can be found on-line in PDF format at this link:

www.grassvalley.com/docs/modular

Safety Summary

Read and follow the important safety information below, noting especially those instructions related to risk of fire, electric shock or injury to persons. Additional specific warnings not listed here may be found throughout the manual.

WARNING Any instructions in this manual that require opening the equipment cover or enclosure are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

Safety Terms and Symbols

Terms in This Manual

Safety-related statements may appear in this manual in the following form:

WARNING Warning statements identify conditions or practices that may result in personal injury or loss of life.

CAUTION Caution statements identify conditions or practices that may result in damage to equipment or other property, or which may cause equipment crucial to your business environment to become temporarily non-operational.

Terms on the Product

The following terms may appear on the product:

DANGER — A personal injury hazard is immediately accessible as you read the marking.

WARNING — A personal injury hazard exists but is not immediately accessible as you read the marking.

CAUTION — A hazard to property, product, and other equipment is present.

Symbols on the Product

The following symbols may appear on the product:



Indicates that dangerous high voltage is present within the equipment enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



Indicates that user, operator or service technician should refer to product manual(s) for important operating, maintenance, or service instructions.



This is a prompt to note fuse rating when replacing fuse(s). The fuse referenced in the text must be replaced with one having the ratings indicated.



Identifies a protective grounding terminal which must be connected to earth ground prior to making any other equipment connections.



Identifies an external protective grounding terminal which may be connected to earth ground as a supplement to an internal grounding terminal.



Indicates that static sensitive components are present which may be damaged by electrostatic discharge. Use anti-static procedures, equipment and surfaces during servicing.

Warnings

The following warning statements identify conditions or practices that can result in personal injury or loss of life:

Dangerous voltage or current may be present — Disconnect power and remove battery (if applicable) before removing protective panels, soldering, or replacing components.

Do not service alone — Do not internally service this product unless another person capable of rendering first aid and resuscitation is present.

Remove jewelry — Prior to servicing, remove jewelry such as rings, watches, and other metallic objects.

Avoid exposed circuitry — Do not touch exposed connections, components or circuitry when power is present.

Use proper power cord — Use only the power cord supplied or specified for this product.

Ground product — Connect the grounding conductor of the power cord to earth ground.

Operate only with covers and enclosure panels in place — Do not operate this product when covers or enclosure panels are removed.

Use correct fuse — Use only the fuse type and rating specified for this product.

Use only in dry environment — Do not operate in wet or damp conditions.

Use only in non-explosive environment — Do not operate this product in an explosive atmosphere.

High leakage current may be present — Earth connection of product is essential before connecting power.

Dual power supplies may be present — Be certain to plug each power supply cord into a separate branch circuit employing a separate service ground. Disconnect both power supply cords prior to servicing.

Double pole neutral fusing — Disconnect mains power prior to servicing.

Use proper lift points — Do not use door latches to lift or move equipment.

Avoid mechanical hazards — Allow all rotating devices to come to a stop before servicing.

Cautions

The following caution statements identify conditions or practices that can result in damage to equipment or other property:

Use correct power source — Do not operate this product from a power source that applies more than the voltage specified for the product.

Use correct voltage setting — If this product lacks auto-ranging power supplies, before applying power ensure that the each power supply is set to match the power source.

Provide proper ventilation — To prevent product overheating, provide equipment ventilation in accordance with installation instructions.

Use anti-static procedures — Static sensitive components are present which may be damaged by electrostatic discharge. Use anti-static procedures, equipment and surfaces during servicing.

Do not operate with suspected equipment failure — If you suspect product damage or equipment failure, have the equipment inspected by qualified service personnel.

Ensure mains disconnect — If mains switch is not provided, the power cord(s) of this equipment provide the means of disconnection. The socket outlet must be installed near the equipment and must be easily accessible. Verify that all mains power is disconnected before installing or removing power supplies and/or options.

Route cable properly — Route power cords and other cables so that they are not likely to be damaged. Properly support heavy cable bundles to avoid connector damage.

Use correct power supply cords — Power cords for this equipment, if provided, meet all North American electrical codes. Operation of this equipment at voltages exceeding 130 VAC requires power supply cords which comply with NEMA configurations. International power cords, if provided, have the approval of the country of use.

Use correct replacement battery — This product may contain batteries. To reduce the risk of explosion, check polarity and replace only with the same or equivalent type recommended by manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Troubleshoot only to board level — Circuit boards in this product are densely populated with surface mount technology (SMT) components and application specific integrated circuits (ASICs). As a result, circuit board repair at the component level is very difficult in the field, if not impossible. For warranty compliance, do not troubleshoot systems beyond the board level.

Sicherheit – Überblick

Lesen und befolgen Sie die wichtigen Sicherheitsinformationen dieses Abschnitts. Beachten Sie insbesondere die Anweisungen bezüglich Brand-, Stromschlag- und Verletzungsgefahren. Weitere spezifische, hier nicht aufgeführte Warnungen finden Sie im gesamten Handbuch.

WARNUNG Alle Anweisungen in diesem Handbuch, die das Abnehmen der Geräteabdeckung oder des Gerätegehäuses erfordern, dürfen nur von qualifiziertem Servicepersonal ausgeführt werden. Um die Stromschlaggefahr zu verringern, führen Sie keine Wartungsarbeiten außer den in den Bedienungsanleitungen genannten Arbeiten aus, es sei denn, Sie besitzen die entsprechende Qualifikationen für diese Arbeiten.

Sicherheit – Begriffe und Symbole

In diesem Handbuch verwendete Begriffe

Sicherheitsrelevante Hinweise können in diesem Handbuch in der folgenden Form auftauchen:

WARNUNG Warnungen weisen auf Situationen oder Vorgehensweisen hin, die Verletzungs- oder Lebensgefahr bergen.

VORSICHT Vorsichtshinweise weisen auf Situationen oder Vorgehensweisen hin, die zu Schäden an Ausrüstungskomponenten oder anderen Gegenständen oder zum zeitweisen Ausfall wichtiger Komponenten in der Arbeitsumgebung führen können.

Hinweise am Produkt

Die folgenden Hinweise können sich am Produkt befinden:

GEFAHR — Wenn Sie diesen Begriff lesen, besteht ein unmittelbares Verletzungsrisiko.

WARNUNG — Wenn Sie diesen Begriff lesen, besteht ein mittelbares Verletzungsrisiko.

VORSICHT — Es besteht ein Risiko für Objekte in der Umgebung, den Mixer selbst oder andere Ausrüstungskomponenten.

Symbole am Produkt

Die folgenden Symbole können sich am Produkt befinden:



Weist auf eine gefährliche Hochspannung im Gerätegehäuse hin, die stark genug sein kann, um eine Stromschlaggefahr darzustellen.



Weist darauf hin, dass der Benutzer, Bediener oder Servicetechniker wichtige Bedienungs-, Wartungs- oder Serviceanweisungen in den Produkthandbüchern lesen sollte.



Dies ist eine Aufforderung, beim Wechsel von Sicherungen auf deren Nennwert zu achten. Die im Text angegebene Sicherung muss durch eine Sicherung ersetzt werden, die die angegebenen Nennwerte besitzt.



Weist auf eine Schutzerdungsklemme hin, die mit dem Erdungskontakt verbunden werden muss, bevor weitere Ausrüstungskomponenten angeschlossen werden.



Weist auf eine externe Schutzerdungsklemme hin, die als Ergänzung zu einem internen Erdungskontakt an die Erde angeschlossen werden kann.



Weist darauf hin, dass es statisch empfindliche Komponenten gibt, die durch eine elektrostatische Entladung beschädigt werden können. Verwenden Sie antistatische Prozeduren, Ausrüstung und Oberflächen während der Wartung.

Warnungen

Die folgenden Warnungen weisen auf Bedingungen oder Vorgehensweisen hin, die Verletzungs- oder Lebensgefahr bergen:

Gefährliche Spannungen oder Ströme — Schalten Sie den Strom ab, und entfernen Sie ggf. die Batterie, bevor sie Schutzabdeckungen abnehmen, löten oder Komponenten austauschen.

Servicearbeiten nicht alleine ausführen — Führen Sie interne Servicearbeiten nur aus, wenn eine weitere Person anwesend ist, die erste Hilfe leisten und Wiederbelebungsmaßnahmen einleiten kann.

Schmuck abnehmen — Legen Sie vor Servicearbeiten Schmuck wie Ringe, Uhren und andere metallische Objekte ab.

Keine offen liegenden Leiter berühren — Berühren Sie bei eingeschalteter Stromzufuhr keine offen liegenden Leitungen, Komponenten oder Schaltungen.

Richtiges Netzkabel verwenden — Verwenden Sie nur das mitgelieferte Netzkabel oder ein Netzkabel, das den Spezifikationen für dieses Produkt entspricht.

Gerät erden — Schließen Sie den Erdleiter des Netzkabels an den Erdungskontakt an.

Gerät nur mit angebrachten Abdeckungen und Gehäuseseiten betreiben — Schalten Sie dieses Gerät nicht ein, wenn die Abdeckungen oder Gehäuseseiten entfernt wurden.

Richtige Sicherung verwenden — Verwenden Sie nur Sicherungen, deren Typ und Nennwert den Spezifikationen für dieses Produkt entsprechen.

Gerät nur in trockener Umgebung verwenden — Betreiben Sie das Gerät nicht in nassen oder feuchten Umgebungen.

Gerät nur verwenden, wenn keine Explosionsgefahr besteht — Verwenden Sie dieses Produkt nur in Umgebungen, in denen keinerlei Explosionsgefahr besteht.

Hohe Kriechströme — Das Gerät muss vor dem Einschalten unbedingt geerdet werden.

Doppelte Spannungsversorgung kann vorhanden sein — Schließen Sie die beiden Anschlußkabel an getrennte Stromkreise an. Vor Servicearbeiten sind beide Anschlußkabel vom Netz zu trennen.

Zweipolige, neutrale Sicherung — Schalten Sie den Netzstrom ab, bevor Sie mit den Servicearbeiten beginnen.

Fassen Sie das Gerät beim Transport richtig an — Halten Sie das Gerät beim Transport nicht an Türen oder anderen beweglichen Teilen fest.

Gefahr durch mechanische Teile — Warten Sie, bis der Lüfter vollständig zum Halt gekommen ist, bevor Sie mit den Servicearbeiten beginnen.

Vorsicht

Die folgenden Vorsichtshinweise weisen auf Bedingungen oder Vorgehensweisen hin, die zu Schäden an Ausrüstungskomponenten oder anderen Gegenständen führen können:

Gerät nicht öffnen — Durch das unbefugte Öffnen wird die Garantie ungültig.

Richtige Spannungsquelle verwenden — Betreiben Sie das Gerät nicht an einer Spannungsquelle, die eine höhere Spannung liefert als in den Spezifikationen für dieses Produkt angegeben.

Gerät ausreichend belüften — Um eine Überhitzung des Geräts zu vermeiden, müssen die Ausrüstungskomponenten entsprechend den Installationsan-

weisungen belüftet werden. Legen Sie kein Papier unter das Gerät. Es könnte die Belüftung behindern. Platzieren Sie das Gerät auf einer ebenen Oberfläche.

Antistatische Vorkehrungen treffen — Es gibt statisch empfindliche Komponenten, die durch eine elektrostatische Entladung beschädigt werden können. Verwenden Sie antistatische Prozeduren, Ausrüstung und Oberflächen während der Wartung.

CF-Karte nicht mit einem PC verwenden — Die CF-Karte ist speziell formatiert. Die auf der CF-Karte gespeicherte Software könnte gelöscht werden.

Gerät nicht bei eventuellem Ausrüstungsfehler betreiben — Wenn Sie einen Produktschaden oder Ausrüstungsfehler vermuten, lassen Sie die Komponente von einem qualifizierten Servicetechniker untersuchen.

Kabel richtig verlegen — Verlegen Sie Netzkabel und andere Kabel so, dass Sie nicht beschädigt werden. Stützen Sie schwere Kabelbündel ordnungsgemäß ab, damit die Anschlüsse nicht beschädigt werden.

Richtige Netzkabel verwenden — Wenn Netzkabel mitgeliefert wurden, erfüllen diese alle nationalen elektrischen Normen. Der Betrieb dieses Geräts mit Spannungen über 130 V AC erfordert Netzkabel, die NEMA-Konfigurationen entsprechen. Wenn internationale Netzkabel mitgeliefert wurden, sind diese für das Verwendungsland zugelassen.

Richtige Ersatzbatterie verwenden — Dieses Gerät enthält eine Batterie. Um die Explosionsgefahr zu verringern, prüfen Sie die Polarität und tauschen die Batterie nur gegen eine Batterie desselben Typs oder eines gleichwertigen, vom Hersteller empfohlenen Typs aus. Entsorgen Sie gebrauchte Batterien entsprechend den Anweisungen des Batterieherstellers.

Das Gerät enthält keine Teile, die vom Benutzer gewartet werden können. Wenden Sie sich bei Problemen bitte an den nächsten Händler.

Consignes de sécurité

Il est recommandé de lire, de bien comprendre et surtout de respecter les informations relatives à la sécurité qui sont exposées ci-après, notamment les consignes destinées à prévenir les risques d'incendie, les décharges électriques et les blessures aux personnes. Les avertissements complémentaires, qui ne sont pas nécessairement repris ci-dessous, mais présents dans toutes les sections du manuel, sont également à prendre en considération.

AVERTISSEMENT Toutes les instructions présentes dans ce manuel qui concernent l'ouverture des capots ou des logements de cet équipement sont destinées exclusivement à des membres qualifiés du personnel de maintenance. Afin de diminuer les risques de décharges électriques, ne procédez à aucune intervention d'entretien autre que celles contenues dans le manuel de l'utilisateur, à moins que vous ne soyez habilité pour le faire.

Consignes et symboles de sécurité

Termes utilisés dans ce manuel

Les consignes de sécurité présentées dans ce manuel peuvent apparaître sous les formes suivantes:

AVERTISSEMENT Les avertissements signalent des conditions ou des pratiques susceptibles d'occasionner des blessures graves, voire même fatales.

ATTENTION Les mises en garde signalent des conditions ou des pratiques susceptibles d'occasionner un endommagement à l'équipement ou aux installations, ou de rendre l'équipement temporairement non opérationnel, ce qui peut porter préjudice à vos activités.

Signalétique apposée sur le produit

La signalétique suivante peut être apposée sur le produit:

DANGER — risque de danger imminent pour l'utilisateur.

AVERTISSEMENT — Risque de danger non imminent pour l'utilisateur.

MISE EN GARDE — Risque d'endommagement du produit, des installations ou des autres équipements.

Symboles apposés sur le produit

Les symboles suivants peut être apposés sur le produit:



Signale la présence d'une tension élevée et dangereuse dans le boîtier de l'équipement ; cette tension peut être suffisante pour constituer un risque de décharge électrique.



Signale que l'utilisateur, l'opérateur ou le technicien de maintenance doit faire référence au(x) manuel(s) pour prendre connaissance des instructions d'utilisation, de maintenance ou d'entretien.



Il s'agit d'une invite à prendre note du calibre du fusible lors du remplacement de ce dernier. Le fusible auquel il est fait référence dans le texte doit être remplacé par un fusible du même calibre.



Identifie une borne de protection de mise à la masse qui doit être raccordée correctement avant de procéder au raccordement des autres équipements.



Identifie une borne de protection de mise à la masse qui peut être connectée en tant que borne de mise à la masse supplémentaire.



Signale la présence de composants sensibles à l'électricité statique et qui sont susceptibles d'être endommagés par une décharge électrostatique. Utilisez des procédures, des équipements et des surfaces antistatiques durant les interventions d'entretien.

Avertissements

Les avertissements suivants signalent des conditions ou des pratiques susceptibles d'occasionner des blessures graves, voire même fatales:

Présence possible de tensions ou de courants dangereux — Mettez hors tension, débranchez et retirez la pile (le cas échéant) avant de déposer les couvercles de protection, de défaire une soudure ou de remplacer des composants.

Ne procédez pas seul à une intervention d'entretien — Ne réalisez pas une intervention d'entretien interne sur ce produit si une personne n'est pas présente pour fournir les premiers soins en cas d'accident.

Retirez tous vos bijoux — Avant de procéder à une intervention d'entretien, retirez tous vos bijoux, notamment les bagues, la montre ou tout autre objet métallique.

Évitez tout contact avec les circuits exposés — Évitez tout contact avec les connexions, les composants ou les circuits exposés s'ils sont sous tension.

Utilisez le cordon d'alimentation approprié — Utilisez exclusivement le cordon d'alimentation fourni avec ce produit ou spécifié pour ce produit.

Raccordez le produit à la masse — Raccordez le conducteur de masse du cordon d'alimentation à la borne de masse de la prise secteur.

Utilisez le produit lorsque les couvercles et les capots sont en place — N'utilisez pas ce produit si les couvercles et les capots sont déposés.

Utilisez le bon fusible — Utilisez exclusivement un fusible du type et du calibre spécifiés pour ce produit.

Utilisez ce produit exclusivement dans un environnement sec — N'utilisez pas ce produit dans un environnement humide.

Utilisez ce produit exclusivement dans un environnement non explosible — N'utilisez pas ce produit dans un environnement dont l'atmosphère est explosible.

Présence possible de courants de fuite — Un raccordement à la masse est indispensable avant la mise sous tension.

Deux alimentations peuvent être présentes dans l'équipement — Assurez vous que chaque cordon d'alimentation est raccordé à des circuits de terre séparés. Débranchez les deux cordons d'alimentation avant toute intervention.

Fusion neutre bipolaire — Débranchez l'alimentation principale avant de procéder à une intervention d'entretien.

Utilisez les points de levage appropriés — Ne pas utiliser les verrous de la porte pour lever ou déplacer l'équipement.

Évitez les dangers mécaniques — Laissez le ventilateur s'arrêter avant de procéder à une intervention d'entretien.

Mises en garde

Les mises en garde suivantes signalent les conditions et les pratiques susceptibles d'occasionner des dommages à l'équipement et aux installations:

N'ouvrez pas l'appareil — Toute ouverture prohibée de l'appareil aura pour effet d'annuler la garantie.

Utilisez la source d'alimentation adéquate — Ne branchez pas ce produit à une source d'alimentation qui utilise une tension supérieure à la tension nominale spécifiée pour ce produit.

Assurez une ventilation adéquate — Pour éviter toute surchauffe du produit, assurez une ventilation de l'équipement conformément aux instructions d'installation. Ne déposez aucun document sous l'appareil — ils peuvent gêner la ventilation. Placez l'appareil sur une surface plane.

Utilisez des procédures antistatiques - Les composants sensibles à l'électricité statique présents dans l'équipement sont susceptibles d'être endommagés par une décharge électrostatique. Utilisez des procédures, des équipements et des surfaces antistatiques durant les interventions d'entretien.

N'utilisez pas la carte CF avec un PC — La carte CF a été spécialement formatée. Le logiciel enregistré sur la carte CF risque d'être effacé.

N'utilisez pas l'équipement si un dysfonctionnement est suspecté — Si vous suspectez un dysfonctionnement du produit, faites inspecter celui-ci par un membre qualifié du personnel d'entretien.

Acheminez les câbles correctement — Acheminez les câbles d'alimentation et les autres câbles de manière à ce qu'ils ne risquent pas d'être endommagés. Supportez correctement les enroulements de câbles afin de ne pas endommager les connecteurs.

Utilisez les cordons d'alimentation adéquats — Les cordons d'alimentation de cet équipement, s'ils sont fournis, satisfont aux exigences de toutes les réglementations régionales. L'utilisation de cet équipement à des tensions dépassant les 130 V en c.a. requiert des cordons d'alimentation qui satisfont aux exigences des configurations NEMA. Les cordons internationaux, s'ils sont fournis, ont reçu l'approbation du pays dans lequel l'équipement est utilisé.

Utilisez une pile de remplacement adéquate — Ce produit renferme une pile. Pour réduire le risque d'explosion, vérifiez la polarité et ne remplacez la pile que par une pile du même type, recommandée par le fabricant. Mettez les piles usagées au rebut conformément aux instructions du fabricant des piles.

Cette unité ne contient aucune partie qui peut faire l'objet d'un entretien par l'utilisateur. Si un problème survient, veuillez contacter votre distributeur local.

Regulatory Notices

Certifications and Compliances

FCC Emission Control

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Changes or modifications not expressly approved by Grass Valley can affect emission compliance and could void the user's authority to operate this equipment.

Canadian EMC Notice of Compliance

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

EN55022 Class A Warning

In a domestic environment, products that comply with Class A may cause radio interference in which case the user may be required to take adequate measures.

Canadian Certified Power Cords

Canadian approval includes the products and power cords appropriate for use in the North America power network. All other power cords supplied are approved for the country of use.

Canadian Certified AC Adapter

Canadian approval includes the AC adapters appropriate for use in the North America power network. All other AC adapters supplied are approved for the country of use.

Laser Compliance

Laser Safety Requirements

The device used in this product is a Class 1 certified laser product. Operating this product outside specifications or altering from its original design may result in hazardous radiation exposure, and may be considered an act of modifying or new manufacturing of a laser product under U.S. regulations contained in 21CFR Chapter 1, subchapter J or CENELEC regulations in HD 482 S1. People performing such an act are required by law to recertify and reidentify this product in accordance with provisions of 21CFR subchapter J for distribution within the U.S.A., and in accordance with CENELEC HD 482 S1 for distribution within countries using the IEC 825 standard.

Laser Safety

Laser safety in the United States is regulated by the Center for Devices and Radiological Health (CDRH). The laser safety regulations are published in the "Laser Product Performance Standard," Code of Federal Regulation (CFR), Title 21, Subchapter J.

The International Electrotechnical Commission (IEC) Standard 825, "Radiation of Laser Products, Equipment Classification, Requirements and User's Guide," governs laser products outside the United States. Europe and member nations of the European Free Trade Association fall under the jurisdiction of the Comité Européen de Normalization Electrotechnique (CENELEC).

For the CDRH: The radiant power is detected through a 7 mm aperture at a distance of 200 mm from the source focused through a lens with a focal length of 100 mm.

For IEC compliance: The radiant power is detected through a 7 mm aperture at a distance of 100 mm from the source focused through a lens with a focal length of 100 mm.

FCC Emission Limits

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesirable operation. This device has been tested and found to comply with FCC Part 15 Class B limits for a digital device when tested with a representative laser-based fiber optical system that complies with ANSI X3T11 Fiber Channel Standard.

Certifications

Safety	ANSI/UL60950-1	Safety of Information Technology Equipment, including Electrical Business Equipment (2003).
	CAN/CSA C22.2, No. 60950-01	Safety of Information Technology Equipment, including Electrical Business Equipment.
	cULus certification	File number: E300838
	IEC 60950-1	Safety of Information Technology Equipment, including Electrical Business Equipment (2003).
	EN60950-1	Safety of Information Technology Equipment, including Electrical Business Equipment (2001).
	73/23/EEC Low voltage directive	(19/02/73) amended by 93/68/EEC (22/07/93)
	89/336/EEC directive	(05/05/89) amended by 93/68/EEC (22/07/93)
EMC	FCC Class A	CISPR Pub. 22 (1985)
	EN55103-1	(1997)
	EN55103-2	(1997)
EU marking	93/68/EEC	(22/07/93)
Environmental specifications	ETS 300 019-1-3 class 3.1 (Feb. 1992)	Operating temperature (for 8900FF and FFN models): + 0°C to + 45°C Operating temperature (for 8900FX model): + 0°C to + 40°C Operating humidity: 10% to 95% non-condensing
	ETS 300 019-1-1 class 1.1 (Feb. 1992)	Storage temperature: - 10 °C to 70°C
Transport specifications	ETS 300 019-1-2 class 2.2 (Feb. 1992) ETS 300 019-1-2 class 2.3 (Feb. 1992)	«Careful transportation» for mechanical conditions «Public transportation» for all other parameters
Protection specifications	IP 20 protection	
Pollution specifications	n°2 pollution	

ESD Protection

Electronics today are more susceptible to electrostatic discharge (ESD) damage than older equipment. Damage to equipment can occur by ESD fields that are smaller than you can feel. Implementing the information in this section will help you protect the investment that you have made in purchasing Grass Valley equipment. This section contains Grass Valley's recommended ESD guidelines that should be followed when handling electrostatic discharge sensitive (ESDS) items. These minimal recommendations are based on the information in the [Sources of ESD and Risks](#) area. The information in [Grounding Requirements for Personnel on page 27](#) is provided to assist you in selecting an appropriate grounding method.

Recommended ESD Guidelines

Follow these guidelines when handling Grass Valley equipment:

- Only trained personnel that are connected to a grounding system should handle ESDS items.
- Do not open any protective bag, box, or special shipping packaging until you have been grounded.

Note When a Personal Grounding strap is unavailable, as an absolute minimum, touch a metal object that is touching the floor (for example, a table, frame, or rack) to discharge any static energy before touching an ESDS item.

- Open the anti-static packaging by slitting any existing adhesive tapes. Do not tear the tapes off.
- Remove the ESDS item by holding it by its edges or by a metal panel.
- Do not touch the components of an ESDS item unless it is absolutely necessary to configure or repair the item.
- Keep the ESDS work area clear of all nonessential items such as coffee cups, pens, wrappers and personal items as these items can discharge static. If you need to set an ESDS item down, place it on an anti-static mat or on the anti-static packaging.

Sources of ESD and Risks

The following information identifies possible sources of electrostatic discharge and can be used to help establish an ESD policy.

Personnel

One of the largest sources of static is personnel. The static can be released from a person's clothing and shoes.

Environment

The environment includes the humidity and floors in a work area. The humidity level must be controlled and should not be allowed to fluctuate over a broad range. Relative humidity (RH) is a major part in determining the level of static that is being generated. For example, at 10% - 20% RH a person walking across a carpeted floor can develop 35kV; yet when the relative humidity is increased to 70% - 80%, the person can only generate 1.5kV.

Static is generated as personnel move (or as equipment is moved) across a floor's surface. Carpeted and waxed vinyl floors contribute to static build up.

Work Surfaces

Painted or vinyl-covered tables, chairs, conveyor belts, racks, carts, anodized surfaces, plexiglass covers, and shelving are all static generators.

Equipment

Any equipment commonly found in an ESD work area, such as solder guns, heat guns, blowers, etc., should be grounded.

Materials

Plastic work holders, foam, plastic tote boxes, pens, packaging containers and other items commonly found at workstations can generate static electricity.

Grounding Requirements for Personnel

The information in this section is provided to assist you in selecting a grounding method. This information is taken from ANSI/ESD S20.20-2007 (Revision of ANSI/ESD S20.20-1999).

Table 1. Product Qualification

Personnel Grounding Technical Requirement	Test Method	Required Limits
Wrist Strap System*	ANSI/ESD S1.1 (Section 5.11)	$< 3.5 \times 10^7$ ohm
Flooring / Footwear System – Method 1	ANSI/ESD STM97.1	$< 3.5 \times 10^7$ ohm
Flooring / Footwear System – Method 2 (both required)	ANSI/ESD STM97.1 ANSI/ESD STM97.2	$< 10^9$ ohm < 100 V

Product qualification is normally conducted during the initial selection of ESD control products and materials. Any of the following methods can be used: product specification review, independent laboratory evaluation, or internal laboratory evaluation.

Table 2. Compliance Verification

Personnel Grounding Technical Requirement	Test Method	Required Limits
Wrist Strap System*	ESD TR53 Wrist Strap Section	$< 3.5 \times 10^7$ ohm
Flooring / Footwear System – Method 1	ESD TR53 Flooring Section and ESD TR53 Footwear Section	$< 3.5 \times 10^7$ ohm
Flooring / Footwear System – Method 2 (both required)	ESD TR53 Flooring Section and ESD TR53 Footwear Section	$< 1.0 \times 10^9$ ohm

* For situations where an ESD garment is used as part of the wrist strap grounding path, the total system resistance, including the person, garment, and grounding cord, must be less than 3.5×10^7 ohm.

Video Media Fiber Converters

Overview

This manual provides basic installation and operation information for the 3G fiber optic mini video media converters (MVMCs) available from Grass Valley. Each media converter is a self-contained unit with a BNC and a fiber connector allowing conversion of video from electrical to fiber/fiber to electrical (receiver or transmitter). These fiber conversion devices allow long distance connections which exceed the limits of coaxial cable.

Media converters can be used with SD/HD/3G-SDI video, AES and MADI formats. A Video Media Converter Rack frame (VMCR3G-18-R) with internal power supply is also available and can house up to 18 channels.

The following converters models can be ordered:

- MVMC-3G-RX – an LC connector to BNC simplex optical receiver that accepts SD/HD/3G-SDI, AES and MADI signals with frequencies from 1260 nm to 1620 nm
- MVMC-3G-TX – an LC to BNC simplex optical transmitter that transmits SD/HD/3G-SDI, AES and MADI signals at 1310 nm
- MVMC-3G-TX1550 – an LC to BNC simplex optical transmitter that transmits SD/HD/3G-SDI, AES and MADI signals at 1550 nm
- VMCR3G-18-R – an 18 channel media converter rack mount frame with power supply

Features

The key features of the fiber media converter devices include the following:

- Add fiber optic functionality to any module or other broadcast equipment as needed
- BNC to/from optical LC connector
- Supports SMPTE 292M/297M/259M/424M and DVB ASI with data rates from 143 Gb/s to 2.97 Gb/s
- Handles pathological test patterns
- Can support 18 channels when installed in rack mountable frame

Mini Video Media Converters (MVMCs)

The mini BNC to Fiber media converters (MVMCs) handle SD/HD/3G-SDI, AES, and MADI formats. They provide video conversion to or from a BNC connector to optical data links for uni-directional communication over single-mode fiber.

These devices can be used with any product where specified video is fed to or from a standard BNC connector. Video is not reclocked in these models. Transmitters have a red arrow area and receivers have blue for easy identification as shown in [Figure 1](#).

For installation and operation instructions, refer to [Mini Video Media Converters \(MVMCs\) on page 32](#).

Devices may be used in standalone mode with an individual power supply ([page 34](#)) or in a VMCR3G-18-R rack mountable frame ([page 40](#)), holding up to 18 transmitters/receivers in any combination and powered by the internal frame power supply.

Note For using the 3G converters in legacy VMCR-18-R and VMCR-18-T frames, refer to [Legacy Media Converters and Frames on page 53](#).

Figure 1. Mini Video Media Converters (MVMCs)



18 Channel Video Media Converter Frames

A 1 RU media converter frame can hold up to 18 channels of mini video media converters (MVMCs). Any combination of MVMC fiber transmitters or receivers can be installed in the frame allowing convenient configuration of any needed applications in a patch panel configuration.

Note Earlier version (legacy) VMC or MVMC converters (not 3G) purchased from Grass Valley, can also be used in this frame. Refer to [Legacy Media Converters and Frames on page 53](#).

The SD/HD/3G-SDI Video Media Converter frame models include:

- VMCR3G-18-R – 18 Channel SD/HD/3G-SDI Video Media Converter Rack Mount Frame ([Figure 2](#))

For installation, configuration, video specifications, and operation information, refer to [18 Channel Media Converter Rack Mount on page 35](#).

Figure 2. VMCR3G-18-R Converter Rack Mount Frame



Other features of the Video Media Converter frames include the following:

- Up to 18 BNC to Fiber MVMCs can be installed in one frame unit, with any combination of receivers or transmitters
- Rack mountable
- 110/240V power supply supporting frame and MVMCs installed
- Front panel transmitter/receiver LED indicators to reflect type and status of installed MVMCs
- Front panel power supply and temperature status LED
- Network connection for remote status reporting

Installation and Operation

This section provides a detailed overview of each video media converter device and how to install and use them.

Fiber Optic Cleaning Requirement

Before making any fiber optic cable mating connections or cabling and after every de-mating cycle, use an industry standard fiber optic cleaning kit, including oil-free compressed air, to clean the fiber connectors and the connectorized fiber end faces. This helps ensure optimum performance of the fiber optic interface. Industry standard fiber optic cleaning kits can be purchased on the web and in electronics stores.

Mini Video Media Converters (MVMCs)

The mini BNC to Fiber video media converters (MVMCs) can be attached directly to any SD/HD/3G-SDI, AES, or MADI video device with a standard BNC connector. The MVMC devices can receive or transmit the signal depending on the MVMC model used.

MVMC Receivers

MVMC receiver devices are identified on the case by a label with RX and an arrow indicating direction in a blue field. The MVMC device shown in [Figure 3](#) is a MVMC-3G-RX single-mode receiver, accepting frequencies from 1260 nm to 1620 nm. This unit inputs an optical signal on the optical connector and transmits an electrical signal out the BNC connector. The signal is not reclocked in these devices. The protective dust cover is shown installed on the optical connector.

Figure 3. Mini Video Media Converter Receiver



MVMC Transmitters

There are two MVMC transmitter types, the MVMC-3G-TX (1310 nm) and the MVMC-3G-TX1550 (1550 nm). Both have a TX on the label and an arrow with a red background showing direction of the output signal as shown in [Figure 5](#). The models are identified on the label of the MVMC and on a tag connected to the cable. These units receive an electrical signal on the BNC connector and output an optical signal out the optical connector.

Figure 4. Mini Video Media Converter Transmitter



Power Supplies

Standalone MVMCs are powered by a separate universal wall plug power supply, MVMC-PS-1, as shown in [Figure 5 on page 34](#) or by the frame power supply when installed in a frame unit.

Power supplies are universal and auto-sensing for all line rates and do not require any configuration. Power ranges from 100-240V.

Installation For Standalone Operation

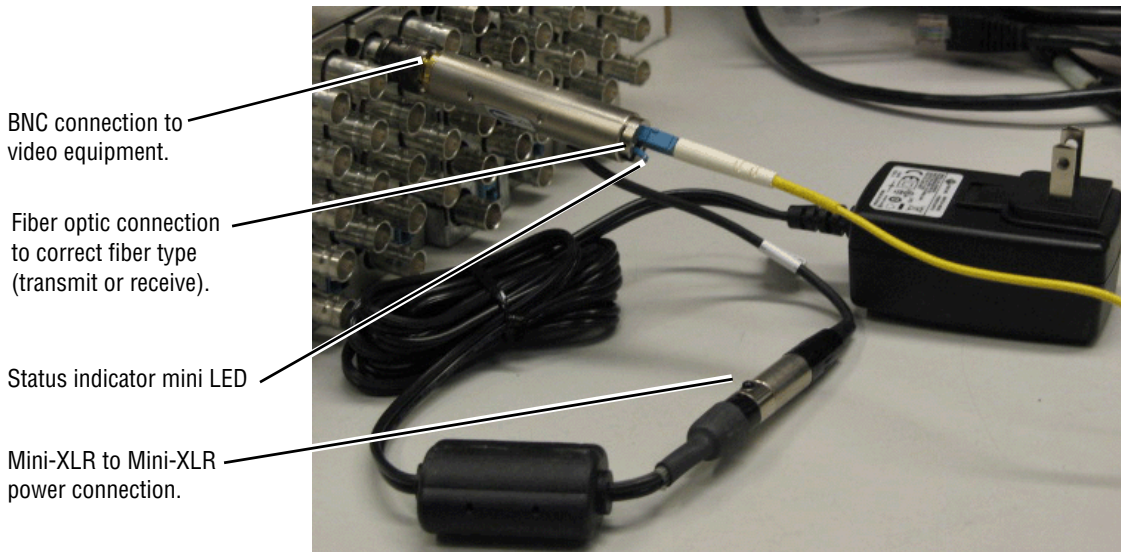
To connect an MVMC in a standalone application, do the following

1. Connect the MVMC receiver or transmitter to the BNC of the video device (transmitter to a video input, receiver to a video output).

CAUTION These are Class A laser devices, use caution when handling laser signals.

2. Remove the protective dust plug on the fiber optic connector and the fiber cable, clean both fiber connections as described in [Fiber Optic Cleaning Requirement on page 32](#), then attach the fiber optic cable to the MVMC.
3. Connect the Mini-XLR connection on the MVMC to the wall plug power supply. The power supply is auto-sensing for the correct voltage.
4. Connect the wall plug to a power source (not shown).

Figure 5. MVMC in Standalone Configuration



The MVMC has mini-LEDs on the rear of the unit that light to indicate the status of the signal (Figure 5). Color and action of the LEDs are given in Table 3.

Table 3. MVMC TX/RX Mini LED Status Conditions

Mini LED Status	TX (transmitter)	RX (receiver)
Green	Normal operation	Normal operation
Red	Transmit fault	Optical input signal out of range
Blinking Green	No cable connected	LOS (no optical input signal)
Blinking Red	Monitoring Alarm ¹	Monitoring Alarm ¹
Blinking Orange	Monitoring Warning	Monitoring Warning

¹ For information on remote monitoring, refer to [Web Page Status Monitoring on page 45](#).

18 Channel Media Converter Rack Mount

The VMCR3G-18-R rack mount frame allows up to 18 mini media converter devices to be housed in a frame in any combination of receivers or transmitters. This configuration is ideal for more robust applications where a larger number of channels are required. Power is supplied internally to each device from the frame power supply. The VMCR3G-18-R model can be mounted in a video rack as described in [Rack Mounting the VMCR3G-18-R on page 37](#).

Rear Frame Overview

The rear of the VMCR3G-18-R frame is shown in [Figure 6](#). Two AC power inputs are provided for the internal power supplies. An Ethernet monitoring interface port is provided on the far right of the frame for accessing diagnostic information with a web browser. See [Frame Monitoring Overview on page 42](#) for setup information.

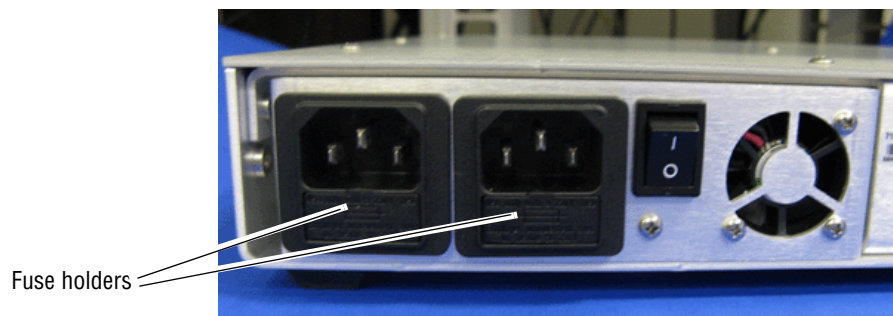
Figure 6. Frame Rear Overview



AC Power Inputs and Power Switch

The VMCR3G-18-R is equipped with two AC power inputs ([Figure 7](#)). Power may be supplied to the units using one or both AC inputs. If both AC inputs are used they will act as redundant supplies (if either one fails the other is capable of fully powering the system). The rating for the AC power input to the system is 90 to 264V, 47 to 63 Hz.

Figure 7. AC Power Inputs and Power Switch



Each power input has a user-replaceable fuse located below the plug receptacle. If the fuse needs to be replaced, first remove power from the frame by unplugging both AC line cords. Replace the fuse with a 2 A (type 5x20) fuse. Both the fuse requirements and the AC inputs are marked on a label to the right of the power inputs for reference. Use a standard IEC type line cord with a plug appropriate for the region of use and a standard IEC connector.

To turn the unit on and off, set the power switch to 1 or 0.

Ethernet Monitoring Interface Port

On the far right rear of the frame is an Ethernet port ([Figure 8](#)) for interfacing over the network to the built-in web-based monitoring interface. This is an Ethernet 10/100T compliant web-enabled port which allows remote status monitoring of the VMCR3G-18-R and its installed MVMC modules (and legacy modules, see [Legacy Media Converters and Frames on page 53.](#))

Connection, diagnostic information, and other functionality such as changing the IP address for this device is discussed in the Frame Monitoring section of this manual under [Web Page Status Monitoring on page 45.](#)

Figure 8. Monitoring Ethernet Port

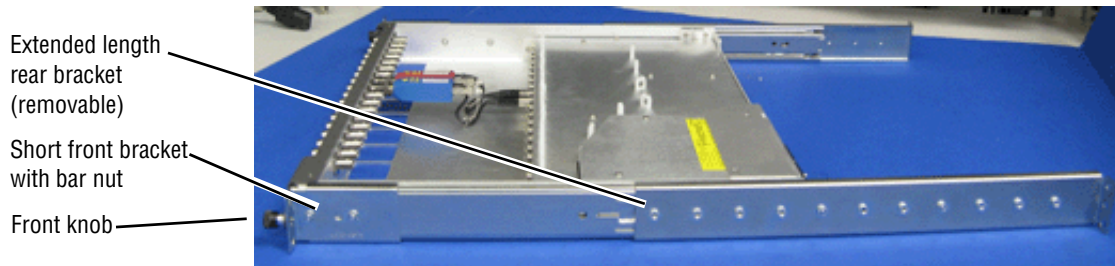


Rack Mounting the VMCR3G-18-R

The VMCR3G-18-R is shipped with a short front bracket and an extended length rear bracket mounted to the unit (Figure 9). This slide version rack mount should accommodate most video racks with some adjustments.

Note Another long rear bracket is included with the additional parts that accompany this frame. It can be used in place of either the front or rear bracket as described in the rack mount instruction pamphlet provided with the additional parts.

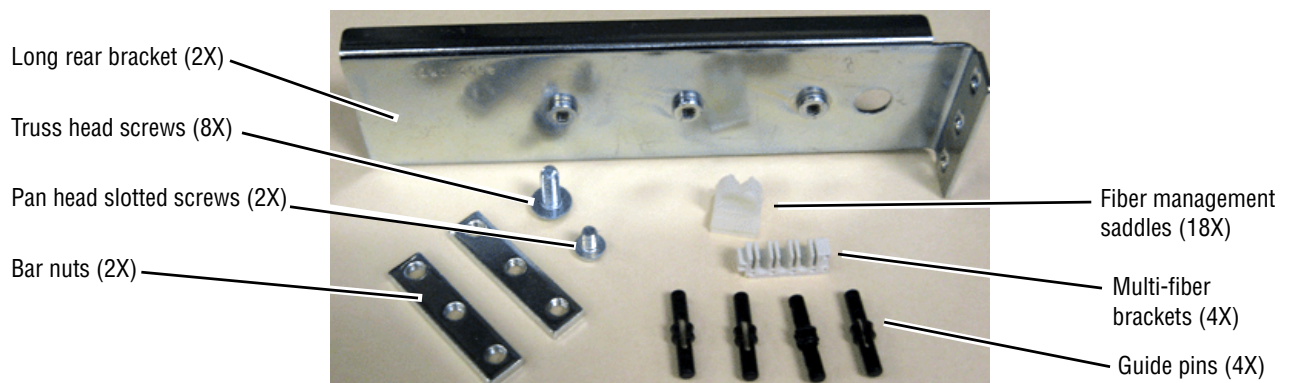
Figure 9. Rack Mount Factory Installed



The following additional parts come in a separate bag shipped with every VMCR3G-18-R frame (Figure 10):

- Installation instruction pamphlet for rack mounting the frame
- Two long rear brackets (used for other applications)
- Two #10-32 three-position bar nuts (for use on rear rack mount)
- Eight #1-32x.50" truss head Phillips screws (for standard video racks)
- Two #8-32x0.25 pan head slotted screws
- Four guide pins
- 18 self-adhesive fiber cable guides
- Four self-adhesive multi-fiber brackets

Figure 10. Additional Parts Shipped



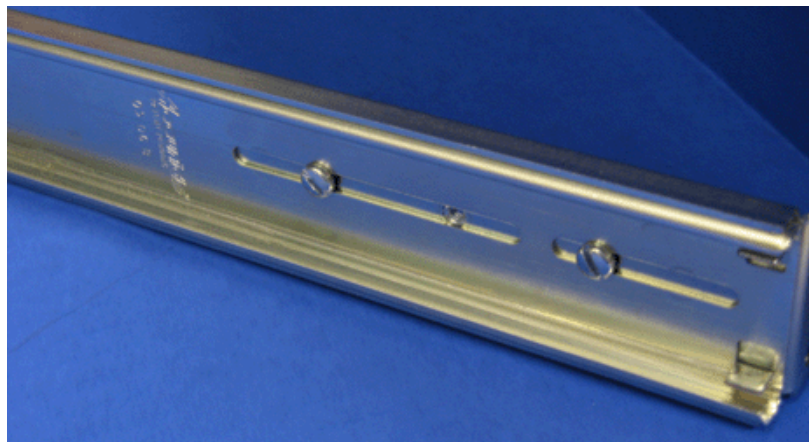
Adjusting Rack Length

For more detailed instructions on installing the unit in different video rack types and information on the additional parts included, refer to the pamphlet that ships with the product in the plastic bag.

The rack mount rails installed on the frame are set to the shortest length for ease of packaging. If you need to adjust the side rails to fit your video rack, refer to the abbreviated instructions below or use the more detailed instructions in the pamphlet described above.

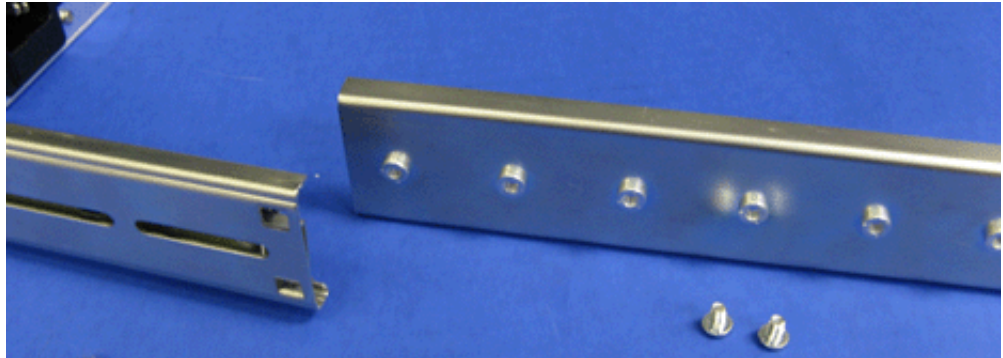
1. On your video rack, measure the distance from the front rack rails to the rear rack rails. Compare this to the length of the side racks as they come from the factory.
2. To lengthen each side, undo the bar nut behind the front brackets holding the slide in place by turning the front knobs on either side of the frame to the left (shown in [Figure 9 on page 37](#)). This will disengage the bar nuts and allow the rack sides to slide out.
3. Extend each side of the rack mount slides to their maximum length.
4. The extended length rear bracket ([Figure 9 on page 37](#)) is removable and can be readjusted to fit the correct rack depth.
5. On the inside end of the extended length rear bracket, remove the two screws holding it to the slide ([Figure 11](#)).

Figure 11. Extended Length Rear Bracket Screws



6. After removing the two screws, carefully snap off the extended length rear bracket (Figure 12).

Figure 12. Extend Length Rear Bracket Removed



7. Determine where to reinstall the extended length rear bracket so it is the correct length for your rack and snap it back on.
8. Reinstall the two screws in two of the positions provided but do not fully tighten rear bracket mounting screws until final adjustment is made. Install the screws as far apart as possible for strength.

Rack Mounting

To install the frame in the rack, follow the instructions below:

1. Insert the guide pins provided in the additional parts into the middle hole of each of the four brackets (see instruction pamphlet for illustration).
2. Insert the frame into the rack using the guide pins to position the brackets in the correct locations.
3. Fully extend the rails. The guide pins will support the slide while the rack screws are attached.
4. Once the rack is in place and in the correct position, tighten the inside screws on the extended length rear bracket.

MVMC Module Installation in VMCR3G-18-R Frames

For a VMCR3G-18-R rack mount frame, changes in optical cabling and module installation can be done either prior to, or after, rack mounting ([Rack Mounting the VMCR3G-18-R on page 37](#)).

Note It is recommended to slide the rack completely out before cabling the modules in the VMCR3G-18-R. This ensures that cable lengths will be sufficient when the frame is pulled out on the slides.

To make changes after rack mounting, unscrew the black knob on the mounting brackets and slide the frame forward in the rack to gain access to the module area. Modules can be installed or removed without powering down the sliding rack.

To install an MVMC module in the frame, follow the instructions below:

Note For ease of installation, it is recommended that slots are populated from left to right to allow room for easier access to the Mini-XLR power connectors.

5. Install a TX or RX module in the frame by first plugging the male Mini-XLR type connector on the module into an open female Mini-XLR type power receptacle in the frame ([Figure 13](#)). (The plugs and receptacles are keyed so that they cannot be improperly installed.)
6. Once the Mini-XLR connector (power) has been mated, connect the BNC on the module to the appropriate BNC bulkhead in the frame. The BNC connector is slightly above the selected Mini-XLR connector when viewing the frame as shown in [Figure 13](#).

Note Earlier version (legacy) VMC or MVMC converters (not 3G) purchased from Grass Valley, can also be used in this frame. Refer to [Legacy Media Converters and Frames on page 53](#).

Figure 13. Installing MVMC Module



7. Install up to 18 modules of any mix of TX/RX and MVMC modules.

Note For using the 3G converters in legacy VMCR-18-R and VMCR-18-T frames, refer to [Legacy Media Converters and Frames on page 53](#).

Fiber Optic Connections

On each MVMC converter in the frame, remove the dust plug (shown in [Figure 13 on page 40](#)) from the optical interface on the module before cabling. Follow the cleaning requirements as described in [Fiber Optic Cleaning Requirement on page 32](#) for both the MVMC connector and the fiber optic cable connector.

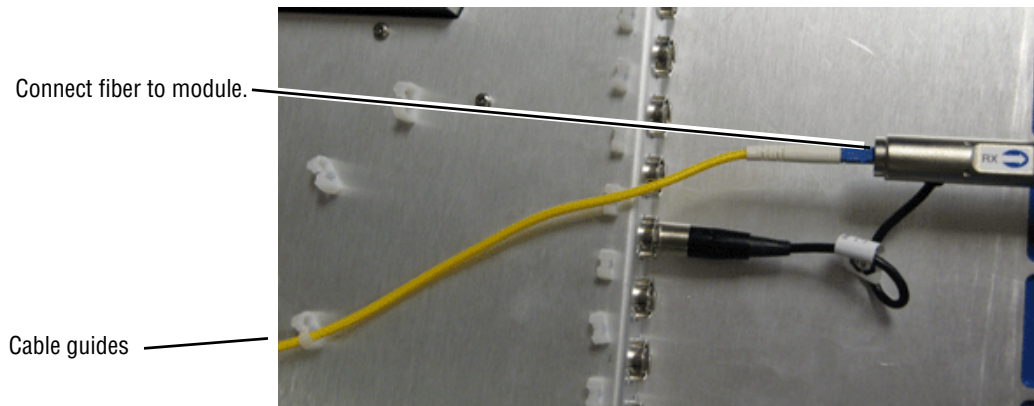
CAUTION Follow fiber optic static cautions when handling fiber cable and connectors.

Connect fiber optic cables to the fiber connectors on each module as follows ([Figure 14](#)):

1. For TX (electrical to fiber) modules, connect the fiber optic signal output connectors to the corresponding TX fiber connectors on the MVMC converters.
2. For RX (fiber to electrical) modules, connect the fiber optic input to corresponding RX fiber connectors on the MVMC converters.
3. Use the existing cable guides in frame to route the optical fiber to the rear of unit ([Figure 14](#)).

Note More cable guides are provided with the additional parts if needed (see [Figure 10 on page 37](#)).

Figure 14. Connect Fiber Cable



Frame Monitoring Overview

Once you have finished installation of all modules and cabling and the unit is powered up, you can monitor the status of the frame and each installed MVMC from the front panel of the frame.

The front panel (Figure 15) of the VMCR3G-18-R has 18 LEDs (one per channel) which display the status of the modules installed. It also has two LEDs for displaying the status of the power supplies and one LED for displaying frame temperature status.

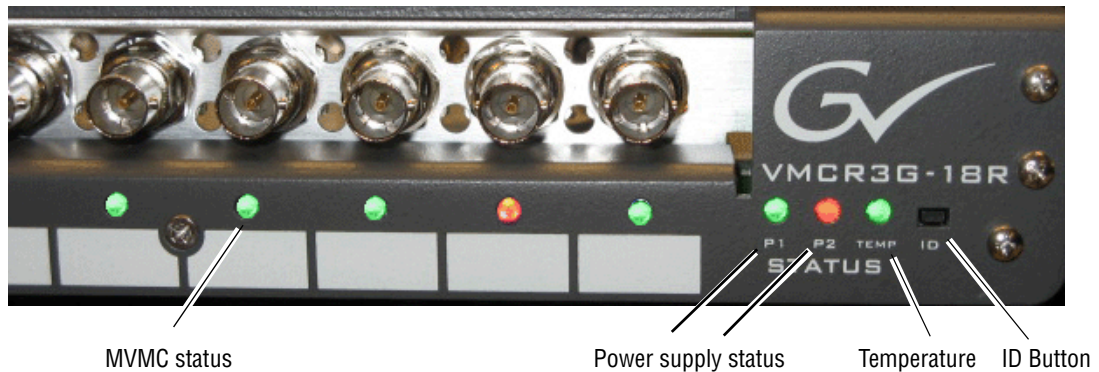
The front panel also has a momentary ID button that turns off the power supply and temperature LEDs and changes the per-channel LEDs to indicate the type of module installed on that BNC. Below each channel status LED is an ID strip that can be labeled using a dry erase marker for identifying information about the channel.

Figure 15. Front Panel Overview



A more detailed view of the panel indicators on the right front of the panel is shown in Figure 16. Refer to the figure below for each of the functions described in detail in this section.

Figure 16. Detailed View of Status Indicators



MVMC Status LEDs

The front panel has 18 LEDs corresponding to each channel in the frame. There are multi-colored/multi-function LEDs that can indicate the type of module installed and the signal status of each channel.

During normal operation (ID button not pressed), each LED will show the signal status of an installed channel ([Figure 17](#)).

Figure 17. Module Status LED (Normal Operation)



[Table 4](#) gives the different LED color conditions for a TX and RX module.

Table 4. MVMC LED Conditions (in Frame)

Status	TX (transmitter)	RX (receiver)
Green	Normal operation	Normal operation
Red	Transmit fault	Optical input signal out of range
Blinking Green	No cable connected	Loss of signal (no optical input)
Blinking Red	Monitoring alarm ¹	Monitoring alarm ¹
Blinking Orange	Monitoring warning	Monitoring warning
Blinking Blue	Power short on module	Power short on module

¹ For monitoring Interface information, refer to [Web Page Status Monitoring on page 45](#).

Power Supply Indicator LEDs

The two LEDs labeled P1 and P2 (Figure 16 on page 42) indicate the status of the VMCR3G-18-R dual power supplies. A properly functioning power supply will light green. If there is a fault in either power supply, the corresponding LED will light red.

Temperature Indicator LED

The TEMP LED (green) shown in Figure 16 on page 42, indicates the frame internal temperature status. A red LED indicates internal temperature has exceeded factory set temperature levels caused by failure of cooling fan or airflow blockage). A green LED indicates normal operation.

ID Button

Pressing and holding the ID button (shown in Figure 16 on page 42) will light the LEDs corresponding to channels populated with media converters. The type of module installed will be reported on the front panel LEDs. Blue indicates a receiver module and red indicates a transmitter module as shown in Figure 18.

Figure 18. Module Status LEDs (ID button Held Down)



Web Page Status Monitoring

A CAT5 Ethernet port is provided for remotely accessing the module status information using the VMCR3G-18-R Media Converter Rack Manager PC application (Digi Connect ME Configuration and Management) via a web browser. This application is installed at the factory with a preset username and password (see Username and Password on the next page). Refer to [Ethernet Monitoring Interface Port on page 36](#) for an illustration of the port.

You may connect the CAT5 jack on the rear of the frame directly to a PC (without the use of a router or hub), using a CAT5 crossover cable or you may connect the device to a network router or hub on the same network as your PC.

From the PC, set the TCP/IP connection to the following:

- The default IP address of the device is shown above the rear connector (10.0.0.1 in the example in [Figure 8 on page 36](#)).
- The Subnet Mask is 255.255.0.0
- The Gateway is 0.0.0.0 (none)

To update the IP address, enter the following into the browser address line using the IP address silk-screened on the rear of your unit:

http://10.0.0.1/network/network_config.htm

This will bring up the application login page shown in [Figure 19](#).

Figure 19. Login Web Page



Digi Connect ME Configuration and Management

Your session is no longer available and you have been automatically logged out.
The session has either expired and timed out or has been disconnected.

[Help](#)

Login	
<p>Welcome to the Configuration and Management interface of the Digi Connect ME</p> <p>Please specify the username and password to login to the web interface.</p> <p>See the User Guide and documentation for more information on logging in or retrieving a lost password.</p>	<p>Username: <input type="text"/></p> <p>Password: <input type="password"/></p> <p><input type="button" value="Login"/></p>

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Note If only a gray box appears and a message in the lower left hand corner stating applet not initialized, you may not have the correct Java version.

On the main Login page, enter the preset username and password (which are case sensitive) as:

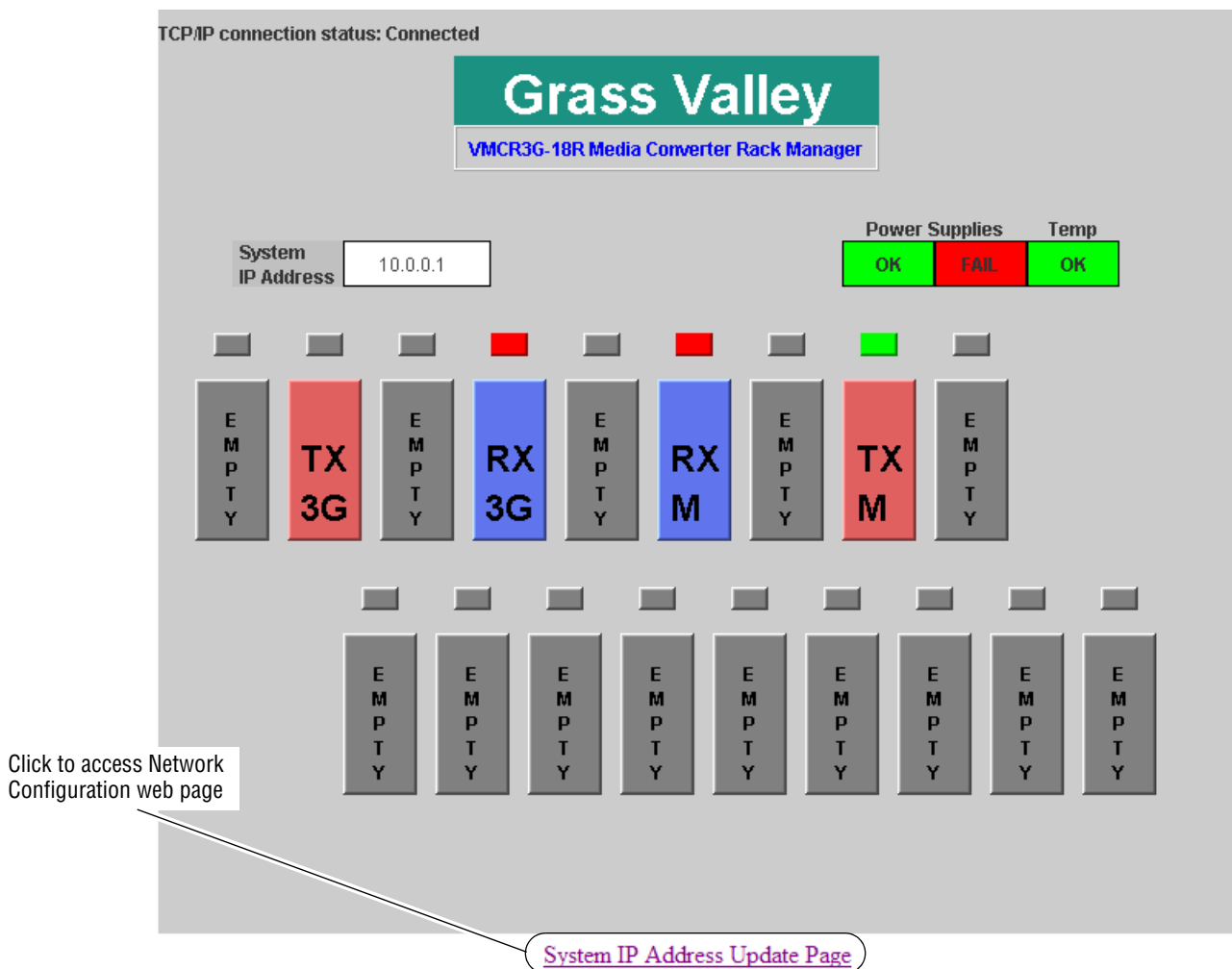
- Username – GVG (all caps)
- Password – VMCR (all caps)

Then press the **Login** button.

You should now see the main VMCR3G-18-R Media Converter Rack Manager status web page shown in [Figure 20](#).

This web page reports in read-only format, the status of each module installed in the frame (including legacy modules, see [Legacy Media Converters and Frames on page 53](#)). It also gives the default System IP address and reports the status of the power supplies and frame temperature.

Figure 20. Main Video Media Rack Manager Web Page



To change the IP Address to be on your network, select the **System IP Update Page** link at the bottom of the main status page.

This will bring up the Network Configuration web page shown in [Figure 21](#).

Note If you need IP address help, check with your system administrator.

Figure 21. Network Configuration Web Page

Select one of the choices to set an IP address, enter the new IP address if necessary, then select **Apply**. The user will be prompted to power cycle the unit at this point to make the new setting effective ([Figure 22](#)). Select **OK**. Then power cycle the unit with the On/Off switch at the rear of the frame ([Figure 6 on page 35](#)).

Figure 22. Power Cycle Message to Reset IP Address

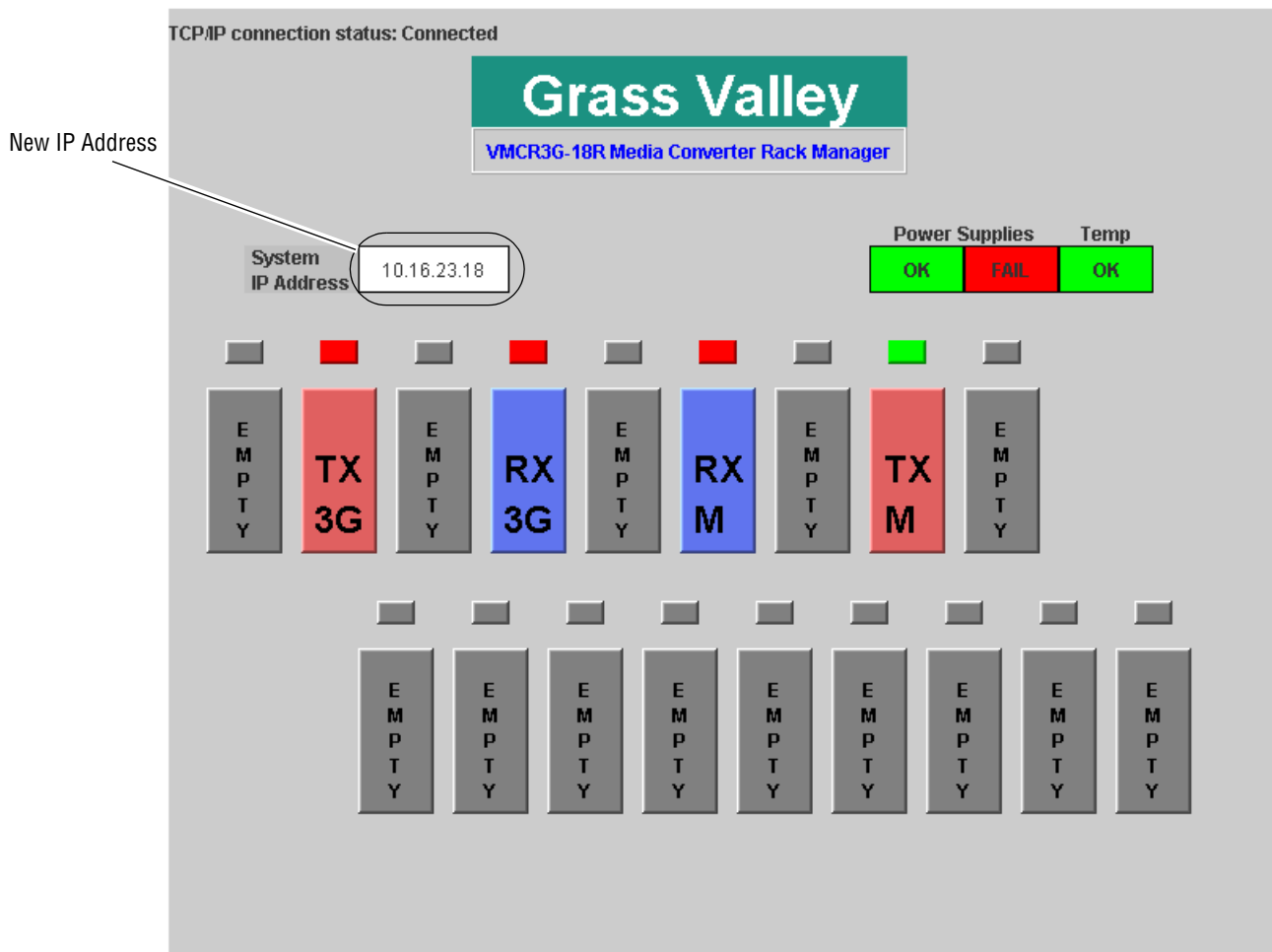


After power cycling the unit, you will need to open the web browser and find the unit by typing the new IP address into the address line.

The Login page (Figure 19 on page 45) will appear and you will need to log in again using the same preset username and password to reach the main status page (Figure 23). The new IP Address should appear in the System IP Address field on the main status web page.

Note Always use the preset username (GVG, all caps) and password (VMCR, all caps) to access the web interface.

Figure 23. Updated IP Address

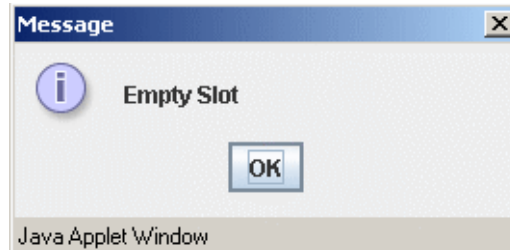


[System IP Address Update Page](#)

Double-clicking on a TX or RX module graphic on the main monitoring web page will bring up a status web page similar to [Figure 25 on page 50](#) for the TX module and [Figure 26 on page 51](#) for the RX module.

Clicking on an empty slot will bring up the message shown in [Figure 24](#).

Figure 24. Empty Slot



On the TX/RX status web pages, the module type and status is reported in the upper left corner. The slot number of the module is reported at the top of the page.

The following read-only status information for each module is reported (as applicable) for the module type:

- Slot location
- Serial Number
- Part Number
- Revision Number
- Manufacturing Date
- Data Rate (the 3G models are not reclocked)
- Part Temperature
- Laser Bias Current
- Transmit Optical Power
- Received Optical Power
- TX Fault Indicator
- Cable Detect Indicator
- Loss of Signal
- Reclocker Lock (legacy VMC modules only, see [Legacy Media Converters and Frames on page 53](#)).

Figure 25. TX Status Web Page

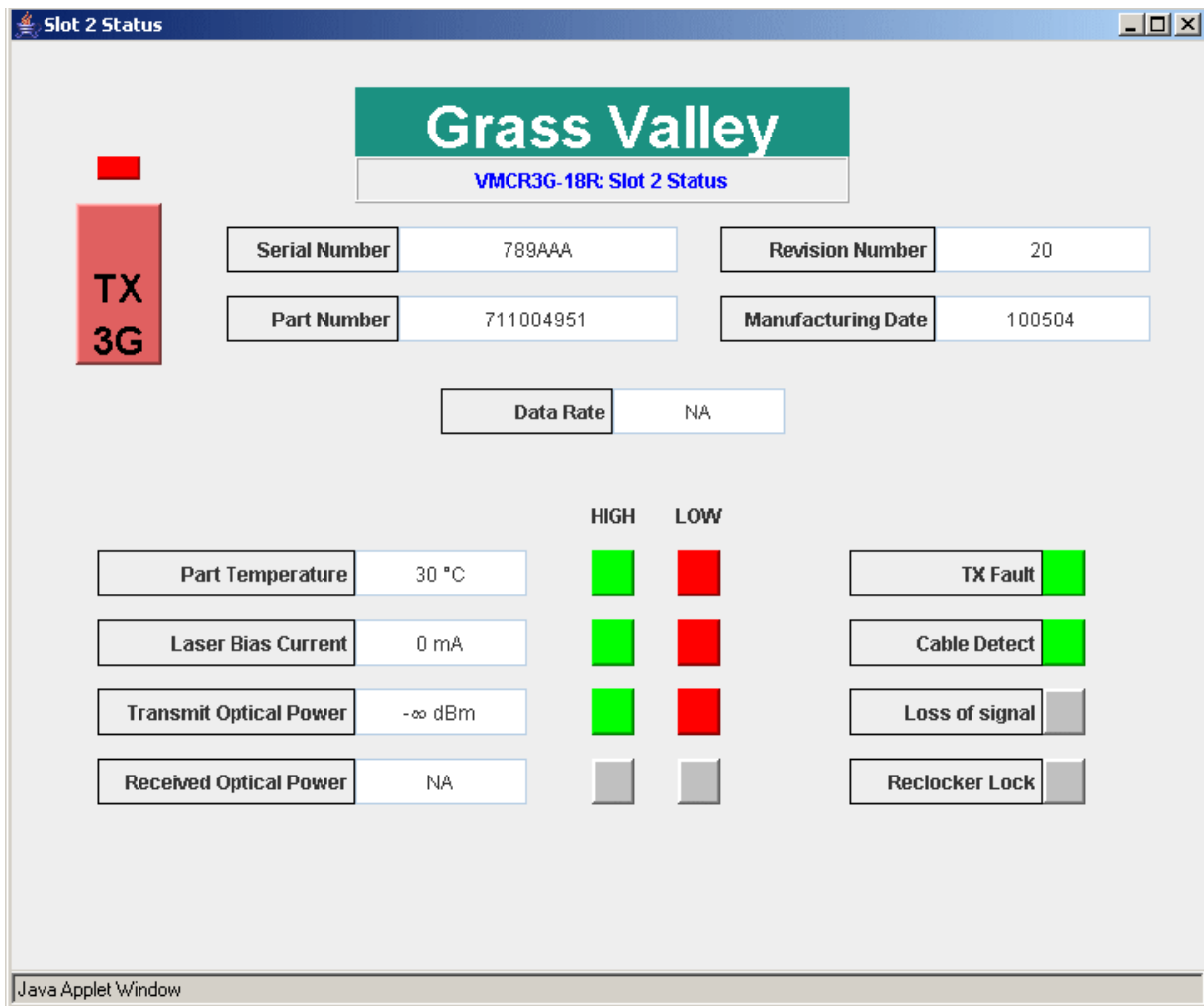
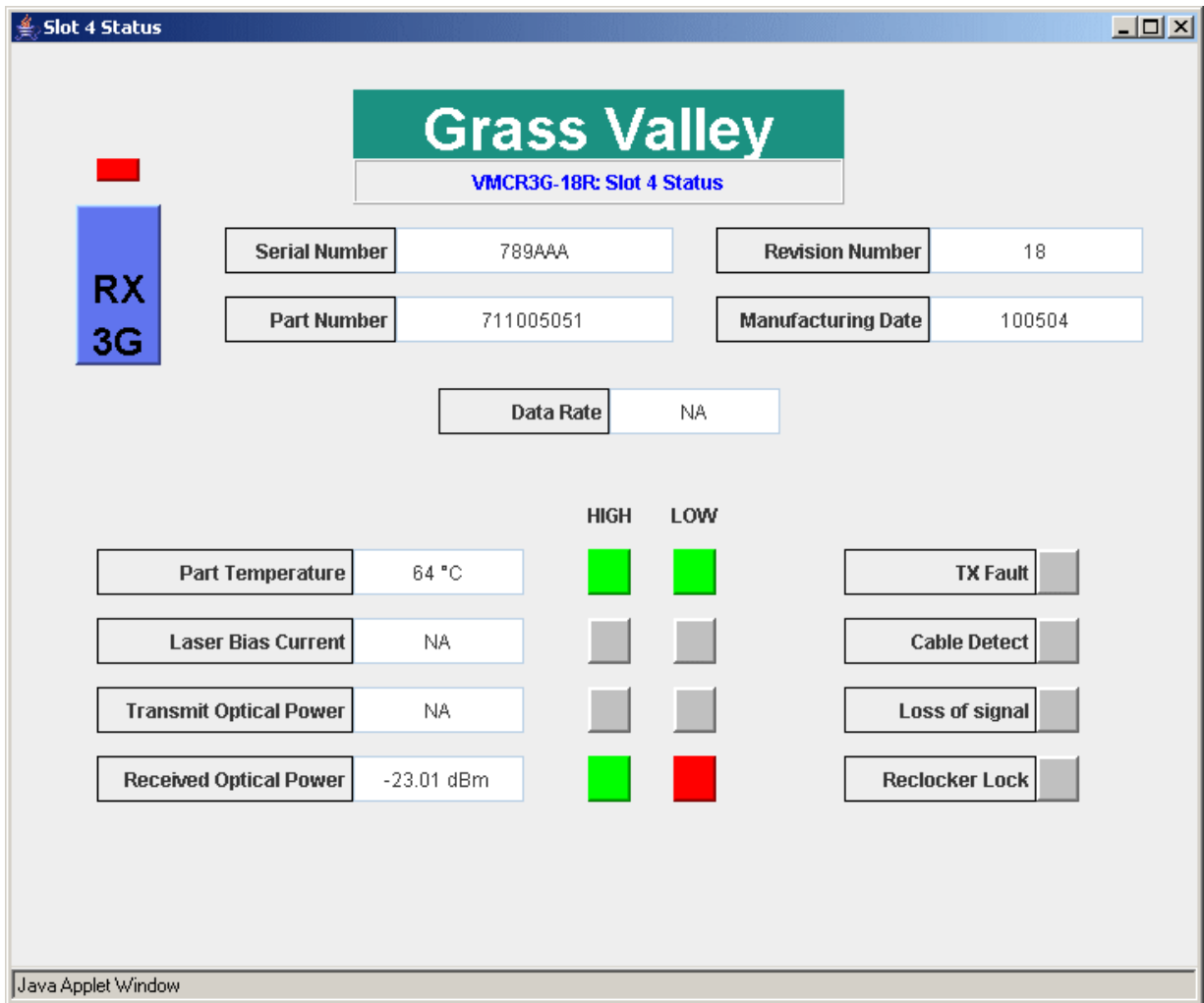
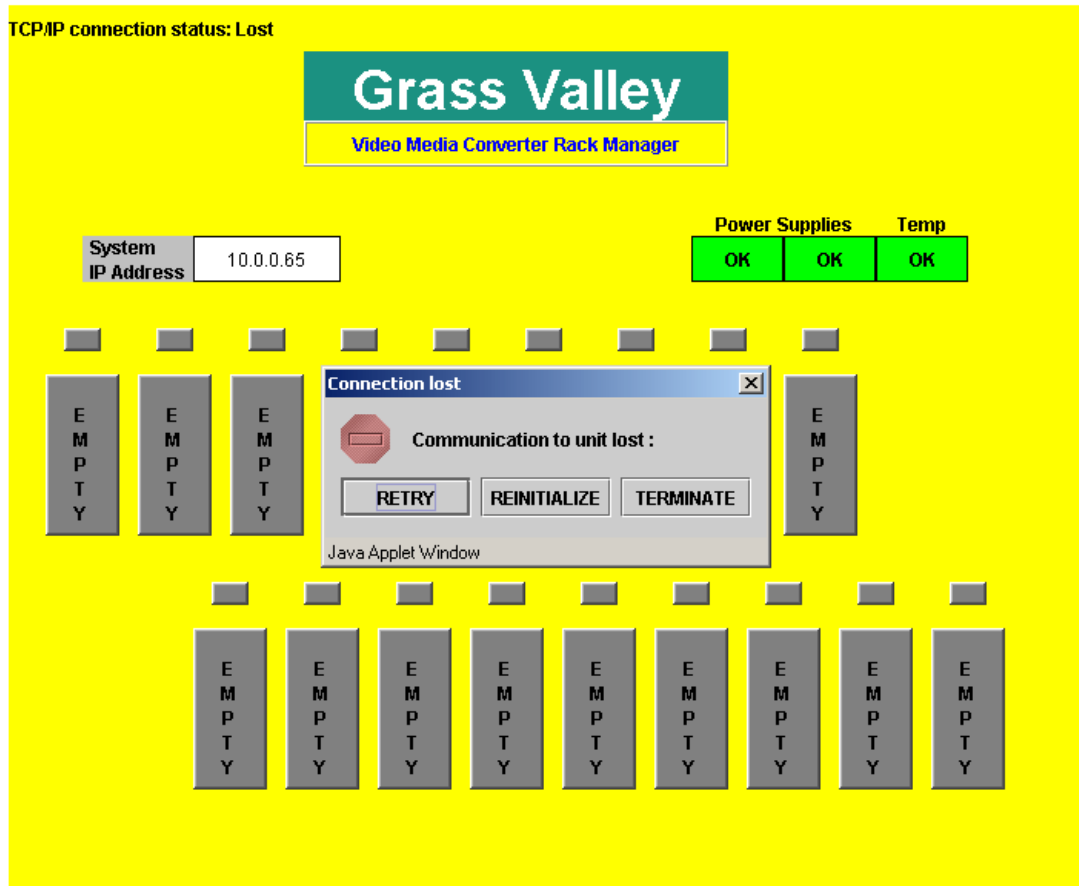


Figure 26. RX Status Web Page



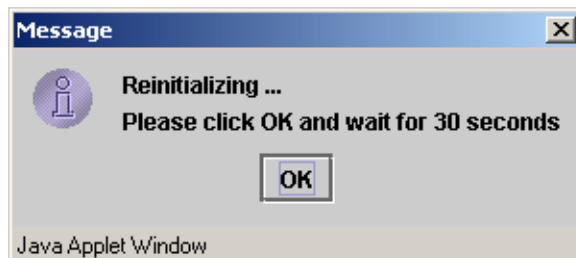
If for some reason communication with the unit is lost over the network, a message similar to the one shown in [Figure 27](#) will appear.

Figure 27. Communication Lost Message



Press the **REINITIALIZE** button to reconnect to the network. The message shown in [Figure 28](#) will appear. Click **OK** and wait 30 seconds for the unit to reconnect.

Figure 28. Reinitialize Message



Legacy Media Converters and Frames

If you have SD and/or HD Video Media Converters (VMCs) and Mini Video Media Converters (MVMCs) and frames (VMCR-18-R and VMCR-18-T) purchased earlier from Grass Valley, they can be used in conjunction with the latest 3G MVMCs.

All legacy VMCs and MVMCs will work in the latest VMCR3G-18-R frame. Refer to the list below on what legacy media converter models are compatible with the older and newer frames.

Note The current 3G models, MVMC-3G-RX, MVMC-3G-TX, and MVMC-3G-TX1550, will transmit in the older frames (VMCR-18-T and VMCR-18-R) but the Digital Diagnostics software will not recognize and report information on these newer 3G converters.

The following legacy VMCs can be used in the current VMCR3G-18-R frame and the legacy VMCR-18-R and VMCR-18-T frames:

- VMC-R-H-2: receiver, HD, 1310 nm
- VMC-T-H-2: transmitter, HD, 1310 nm
- VMC-R-S-2: receiver, SD, 1310 nm
- VMC-T-S-2: transmitter, SD, 1310 nm

The following legacy MVMCs can be used in the current VMCR3G-18-R frame and the legacy VMCR-18-R and VMCR-18-T frames:

- MVMC-R-H-2: receiver, HD, 1310 nm
- MVMC-T-H-2: transmitter, HD, 1310 nm
- MVMC-T-H-3L: transmitter, SD, 1550 nm

Specifications

Device specifications are given in the following tables:

- MVMC Transmitters (1310 nm and 1550 nm) – [Table 5](#)
- MVMC Receiver (1260 > 1620 nm) – [Table 6](#)
- VMCR3G-18-R Frames – [Table 7 on page 55](#)
- Wall Plug with Mini-XLR – [Table 8 on page 55](#)

Table 5. MVMC Transmitter Specifications

Model Numbers	MVMC-3G-TX	MVMC-3G-TX1550
Parameters @ 2.97 Gb/s (75% Color Bars)		
Transmit channels	1	
Optical interface	LC	
Electrical interface	75 ohm BNC	
Wavelength 1	1310 nm	1550 nm
Power output at 2.97 Gb/s	Min./Max. -6 dBm / -3 dBm (Typical: -4.5 dBm)	Min./Max. 0 dBm / +3 dBm (Typical: +1.5 dBm)
Link distance with MVMC-3G-RX receiver @ 2.97 Gb/s	10 km	50 km
Data rates supported	143 Mb/s to 2.97 Gb/s	
Power		
Standalone operation	Provided by MVMC-PS-1 wall power supply (100-240V)	
Installed in VMCR3G-18-R rack mount frame	Provided by internal frame power supply	

Table 6. MVMC Receiver Specifications

Model Number	MVMC-3G-RX
Parameters @ 2.97 Gb/s (75% Color Bars)	
Receiver channels	1
Low wavelength	1260 nm
High wavelength	1620 nm
Maximum receive signal level	0 dBm
Minimum receive signal level	-20 dBm
Power	
Standalone operation	Provided by MVMC-PS-1 wall power supply (100-240V)
Installed in VMCR3G-18-R rack mount frame	Provided by internal frame power supply

Table 7. VMCR3G -18-R Frame Specifications

Parameter	Value
Recommended Operating Conditions	
Number of channels per frame	18 (any mix of transmitters/receivers)
Operating ambient temperature	0 °C (minimum), +55 °C (maximum) (when fully populated with 18 media converters)
Supply voltage	90-264 VAC
Power dissipation	35 W (typical), 40 W (maximum) (when fully populated with 18 media converters)
Mechanical	
Width	19 in.,
Height	3.5 in., 1 RU

Table 8. Wall Plug with Mini-XLR Power Supply Specifications

Parameter	Value
Input voltage	100 V (minimum), 240 V (maximum)
Output voltage (DC)	+5V @ 100mA

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