

About this Guide

Document provides information on the cables for connecting devices, subscriber and HSPA Networks to the EG 6000.

Includes pin assignments for each type of physical interface along with specific information applicable to V.24/RS232 connections and Ethernet LAN cabling. A list of general cabling rules is also provided at the end of this document.

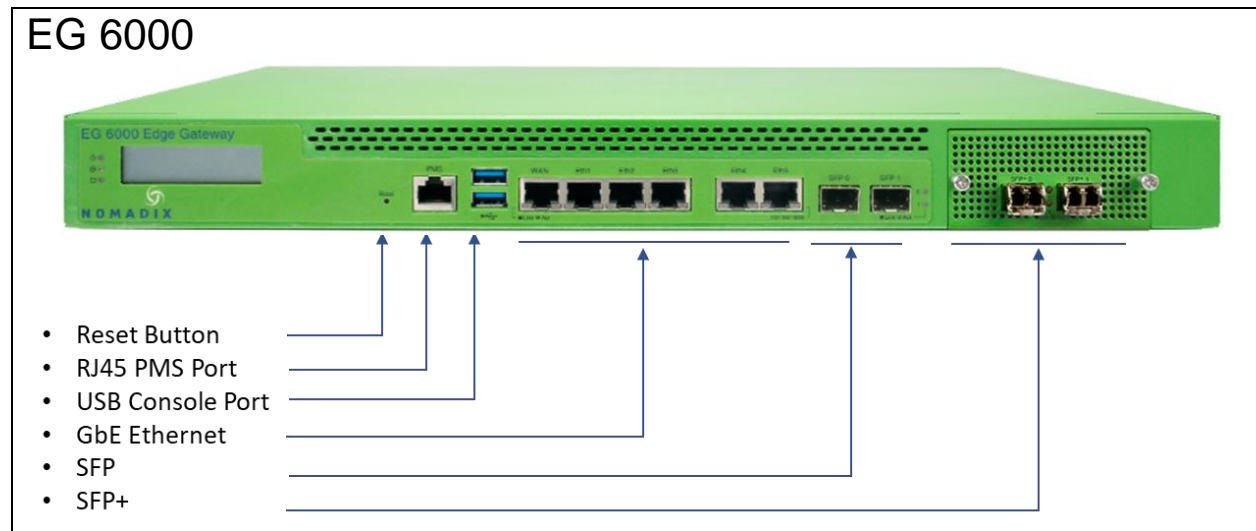


Figure 1. EG 6000 I/O INTERFACES

Reset Button

The Reset Button is a mechanical push mechanism accessible through an opening, with a pencil lead size diameter tool (paper clip), in the front of the chassis.

- Depress the Reset Button momentarily and release to restart the EG 6000. LCD will display:

```
System is booting...  
Nomadix EG 6000
```

Restoring the Administrative Login and Password

- Depress and hold the Reset Button for 10+ seconds then release the Reset Button, then EG 6000 will not restart, however the Administrative Login and Password will be restored to default values and saved to flash.

login: admin

password : admin

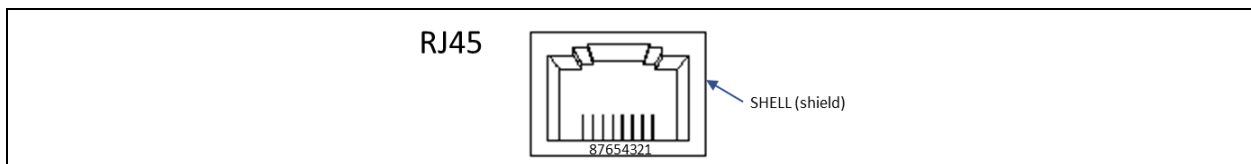
Syslog: contains a record of this action.

RJ45 PMS PORT

The EG 6000 utilizes the RJ45 Asynchronous port.

An optional (sold separately) *PMS Serial Hardware Integration Kit* (Part Number 715-5001-010) is available and includes the necessary cable and built in optical isolator for circuit protection to the Property Management System.

The RJ45 provides the following pinouts for PMS operation. Please note: this port is *ONLY USED* for PMS (Property Management System), connecting other devices can result in failure.



PIN	Signal Name	Direction	PIN	Signal Name	Direction
1	RTS	out	5	SGnd	-
2	DTR	out	6	RXD	in
3	TXD	out	7	DSR	in
4	SGnd	-	8	CTD	in

Figure 2. EG6000 RJ45 PMS PINOUTS

The following figure depicts the typical connection from EG 6000 to PMS with RJ45 to DB9 connector

The Optical Isolator is built into the connector designed to help protect the EG 6000 and PMS during power surges, hot plug in and lightning induction helping to avoid more costly repairs

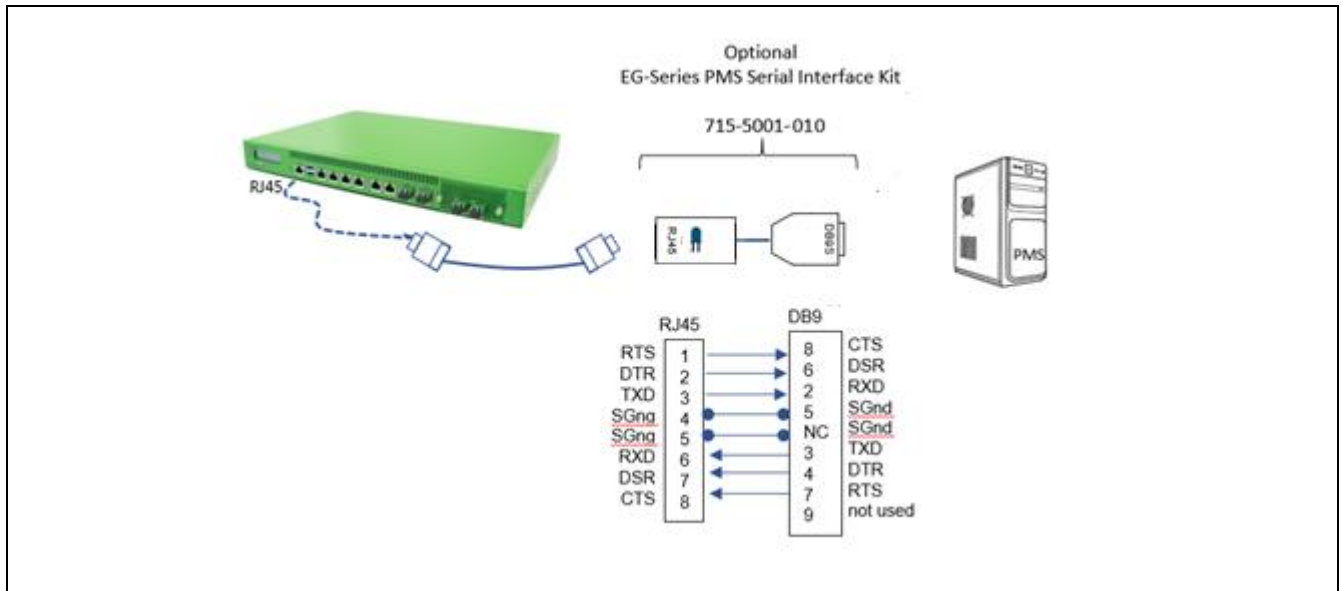



Figure 3. EG 6000 RJ45 PMS to PMS DTE

Please refer to NSE Configuration PMS for asynchronous speeds of 300 to 38,400 bps and character structure, data bits, stop bits and parity bits.

USB Console Port

An optional (sold separately) USB 3.0 (Type A) Console port cable (Part No. 715-4001-001) presents a DCE appearance and its pin-out is shown below, for direct connection to Laptop with DB9M connector.

The USB Console Port is port labeled with the USB Trident Symbol . Only the upper port is used.

The console port is typically only used during installation of the EG6000.

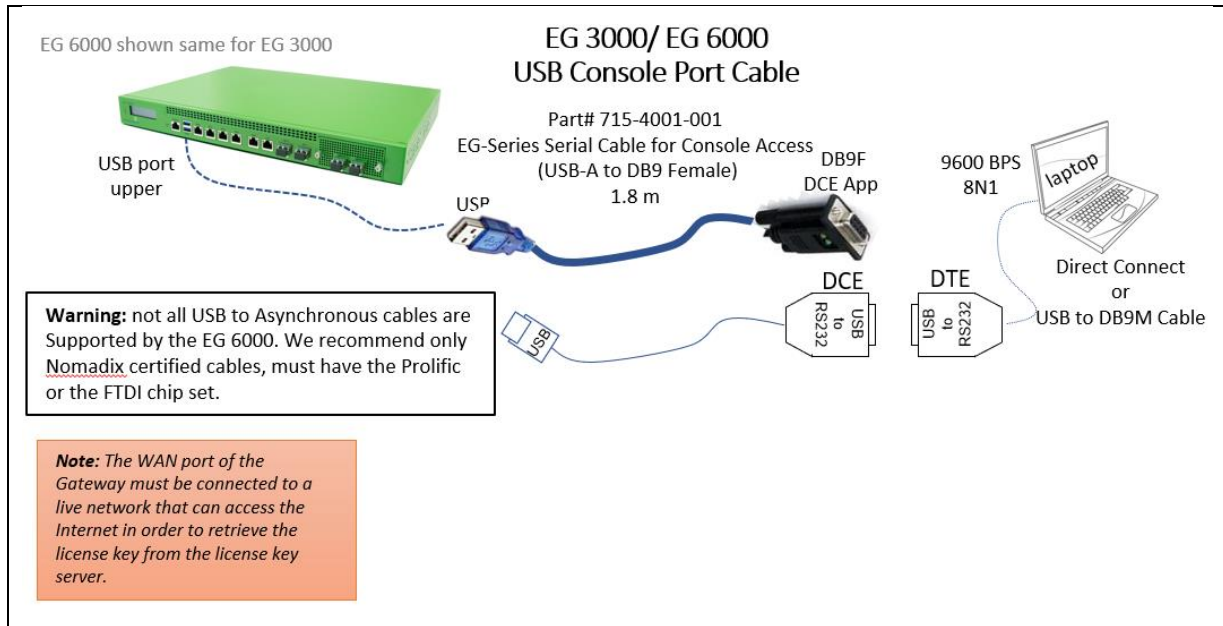


Figure 4. EG 6000 CONSOLE PORT CONNECTION TO LAPTOP

Please note: The EG 6000 Console port only supports asynchronous 9600bps 8N1. Laptop must be configured to match speed.

Gigabit Ethernet Ports

Gigabit Ethernet (1000 BaseT) uses all the pairs for bidirectional traffic in the RJ45 connector. Also known as IEEE802.3ab the standard for Gigabit Ethernet over copper, it requires as least Category 5 cable, or better by using Category 5e (Category 5 enhanced) or Category 6 are recommended.

PIN	Signal Name	Direction	PIN	Signal Name	Direction
1	BI_DA+	Bi-Directional	5	BI_DC-	Bi-Directional
2	BI_DA-	Bi-Directional	6	BI_DA-	Bi-Directional
3	BI_DB+	Bi-Directional	7	BI_DD+	Bi-Directional
4	BI_DC-	Bi-Directional	8	BI_DD-	Bi-Directional

Figure 5. EG6000 GBE PORTS

SFP Ports

SFP (Small Form Factor Pluggable) Gigabit Fiber ports require a Transceiver, see table below of various Transceivers:

Part Number	Description	Comment
715-2010-001	1Gb Multi-Mode SFP 850nm Transceiver	Multi-Mode SFP's work in the 850nm wavelength and are typically used for short distances i.e. 100 to 500m.
715-2020-001	1Gb Single Mode SFP 1310nm Transceiver	Single-Mode SFP's work in the 1310 and 1550nm wavelength and are typically used for Long distances i.e. 2km+

Table 1. EG6000 SFP TRANSCEIVERS

SFP+ Ports

SFP+ (Small Form Factor Pluggable) 10 Gigabit Fiber ports require a Transceiver, see table below of various Transceivers:

Part Number	Description	Comment
715-1010-001	10Gb Multi-Mode SFP 850nm Transceiver	Multi-Mode SFP's work in the 850nm wavelength and are typically used for short distances i.e. 100 to 500m.
715-1020-001	10Gb Single Mode SFP 1310nm Transceiver	Single-Mode SFP's work in the 1310 and 1550nm wavelength and are typically used for Long distances i.e. 2km+

Table 2. EG 6000 SFP+ TRANSCEIVERS

General Cable Rules

Following, is a list of general rules that apply to cables used with the EG 6000:

- All cables used to attach an external device to an EG 6000 must be shielded to ensure compliance with part 15 of the FCC code. Braid mesh shielding is highly recommended in combination with an overall foil shield. Braid mesh alone is the next best choice.
- Cables must provide adequate shielding such that the system will comply with the emission limits of EN 55022 and appropriate immunity requirements of EN 55024. Recommended cable length for EMC compliance is 3 meters. Cables longer than 3 meters may not comply with EMC requirements.