Industrial VGA Splitter/Extender via CAT5 with M12 Connectors
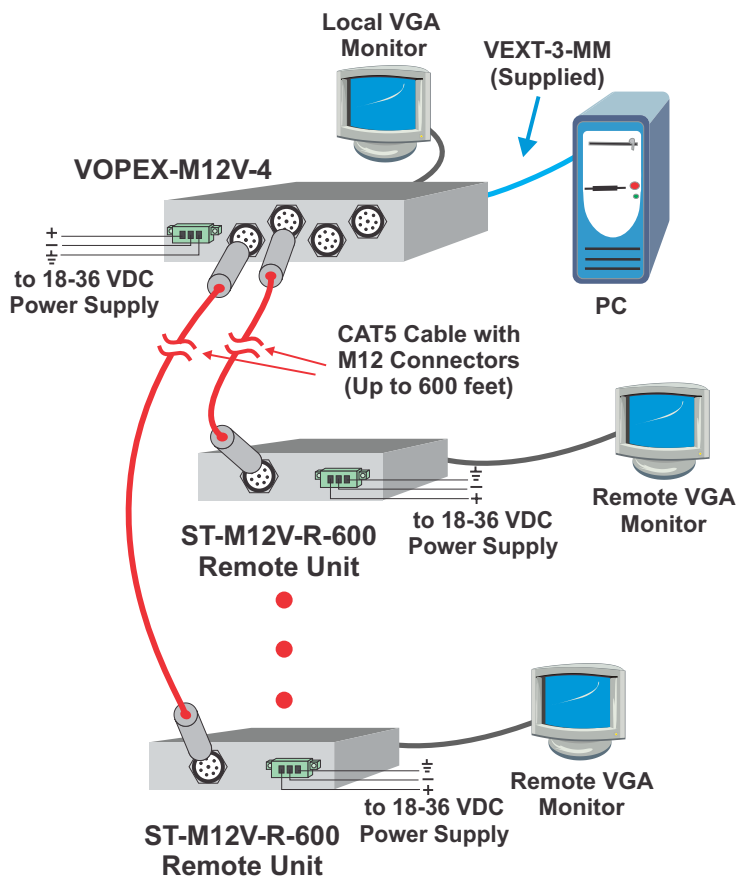### VOPEX®

Drive up to 16 displays 600 feet (183 meters) away from one computer in rail transportation and industrial environments

- Supports resolutions up to 1920x1440.
- Easily expandable. Add remote units as you add monitors.
- Optional audio can be broadcast to self-powered stereo speakers at the local unit and each remote location.
- Meets the electrostatic discharge (ESD) immunity requirements of IEC/EN 61000-4-2.
- High quality rugged steel construction with durable powder coat finish.
- M12 connectors resist vibration and provide reliable connectivity in harsh environmental conditions.
- Integrated mounting brackets for easy surface/wall mounting.
- Ideal for digital signage, passenger information systems on mass transit, train stations, industrial environments, airports, and other applications that require multiple displays with reliable robust connections.

VOPEX-M12V-4 Local Unit (Front & Back) and ST-M12V-R-600 Remote Unit

- **Vibration resistant**
- **Robust Screw Terminal Power Connection**
- **High quality rugged steel construction**
- **Meets EN 50155 Standards**

The VOPEX® Industrial VGA Video Splitter/Extender simultaneously broadcasts high-resolution video from one computer to 4, 8, or 16 remote monitors located up to 600 feet (183 meters) away using CAT5/5e/6 cable with M12 connectors. The robust M12 connector system is ideal for rail transportation and harsh industrial environments where reliable connections are required.

VGA video splitter/extender system has two components: the VOPEX-M12V-x VGA broadcast unit, which connects to the host computer and also supplies video to a local monitor, and an XTENDEX® ST-M12V-R-600 remote unit for each remote monitor. The units are interconnected by CAT5/5e/6 cable terminated with M12 connectors.

Local VGA Monitor

VEXT-3-MM (Supplied)

VOPEX-M12V-4

to 18-36 VDC Power Supply

PC

CAT5 Cable with M12 Connectors (Up to 600 feet)

ST-M12V-R-600 Remote Unit

to 18-36 VDC Power Supply

Remote VGA Monitor

ST-M12V-R-600 Remote Unit

to 18-36 VDC Power Supply

Remote VGA Monitor

NETWORK TECHNOLOGIES INCORPORATED

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Specifications

Local Unit

Video Input

- Supports a computer with VGA video.
- Male 15-pin HD connector.
- Input frequency ranges:
  - Horizontal: 15 to 130 kHz.
  - Vertical: 30 to 150 Hz
- Supports Separate and Composite TTL level sync and Sync on Green.
- Input impedance: 75 Ohms.
- Maximum input levels: 1.45 p-p.
- Video is DC coupled.

Video Output

- Female 8-pin A-Coded M12 connectors for CAT5/5e/6 cable to remote units.
- Female 15-pin HD connector for local monitor.
- Crisp and clear 1920x1440 video resolution.
- Output impedance: 75 Ohms.
- Maximum output level: 1.45Vp-p

Optional Audio

- Terminal block for stereo audio connections.
- Frequency response: 20 Hz to 20 kHz, ±1dB.
- Signal-to-Noise Ratio (SNR): 76 dBA.
- Total Harmonic Distortion and Noise (THD+N): 0.017%
- Stereo Crosstalk: -70 dB.
- Input impedance: 10k Ohms.
- Line level output; supports multimedia speakers.
  - CD quality audio output.
- Maximum I/O levels for audio: 3.1 Vp-p (line level).

Cables

- 3-foot (0.91-meter) VGA cable included.
- Use CAT5, CAT5e or CAT6 UTP straight through cable for TIA/EIA-568B wiring terminated with 8-pin male M12 connectors (not included).
  - Use M12-8PWTP-M-FA to terminate both ends of CAT5/5e/6 cable.

Power

- 18~36 VDC via 3-pole detachable screw terminal.
- Power consumption: <5W

Environmental

- Operating temperature: -4 to 158°F (-20 to 70°C)
- Storage temperature: -40 to 185°F (-40 to 85°C)
- Operating and Storage Relative Humidity: 17 to 90%

Regulatory Approvals

- CE, RoHS
- EN51055, EN50121-3-2

Remote Unit

Video Output

- Female 15-pin HD connector.
- Supports resolutions up to 1920x1440.
  - When using CAT6 cable, some degradation may be experienced, depending on the construction of the cable.
- Output impedance: 75 Ohms.
- Maximum output level for video: 1.45Vp-p.
- Video quality adjustment for different lengths of CAT5/5e/6 cable done manually.

Optional Audio

- Terminal block for stereo audio connections.
- Frequency response: 20 Hz to 20 kHz, ±1dB.
- Signal-to-Noise Ratio (SNR): 76 dBA.
- Total Harmonic Distortion and Noise (THD+N): 0.017%.
- Stereo crosstalk: -70 dB.
- Line level output; supports multimedia speakers.
  - CD quality audio output.
- Maximum output levels: 3.1Vp-p (line level).

Power

- 18~36 VDC via 3-pole detachable screw terminal.
- Power consumption: <5 W

Environmental

- Operating temperature: -4 to 158°F (-20 to 70°C)
- Storage temperature: -40 to 185°F (-40 to 85°C)
- Operating and Storage Relative Humidity: 17 to 90% non-condensing RH.

Regulatory Approvals

- CE, RoHS
- EN51055, EN50121-3-2

Warranty

- Two years

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Distances and Resolutions for CAT5/CAT5e and CAT6 Cables

Cable	Distance (feet)	Maximum Resolution
CAT5/CAT5e(UTP)	600	1024x768 at 60Hz
	400	1280x1024 at 60Hz
	300	1600x1200 at 60Hz
	100	1920x1440 at 60Hz
CAT5/CAT5e (STP) CAT6 (UTP)	300	1024x768 at 60Hz
	200	1280x1024 at 60Hz
	100	1920x1440 at 60Hz

Distances and Resolutions for CAT5 EXANE cable

Distance (feet)	Maximum Resolution
200	1280x1024 at 60Hz
100	1920x1440 at 60Hz
50	1920x1440 at 60Hz

Industrial VGA Splitter/Extender via CAT5 with M12 Connectors

NTI Part #	Supported Features	Desktop or Rackmount	# of Ports	Size WxDxH (In)
VOPEX-M12V-4	VGA Video	Desktop	4	5.63x3.46x1.71
VOPEX-M12V-8	VGA Video	Desktop	8	5.63x3.46x3.00
VOPEX-M12V-16	VGA Video	Desktop	16	11x3.46x3.00

Industrial VGA Splitter/Extender with Stereo Audio via CAT5 with M12 Connectors

NTI Part #	Supported Features	Desktop or Rackmount	# of Ports	Size WxDxH (In)
VOPEX-M12VA-4	VGA Video, Stereo Audio	Desktop	4	5.63x3.46x1.71
VOPEX-M12VA-8	VGA Video, Stereo Audio	Desktop	8	5.63x3.46x3.00
VOPEX-M12VA-16	VGA Video, Stereo Audio	Desktop	16	11x3.46x3.00

Industrial CAT5 VGA Video Extenders, Remote Units

NTI Part #	Supported Features	Desktop or Rackmount	# of Ports	Size WxDxH (In)
ST-M12V-R-600	VGA Video	Desktop	NA	3.48x3.08x1.45
ST-M12VA-R-600	VGA Video, Stereo Audio	Desktop	NA	3.48x3.08x1.45

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