

## netDimmer - Remote LED Dimming Interface Unit

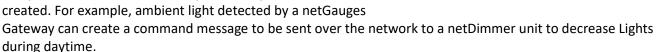
netDimmer provides remote control of up to 4 separate LED lighting circuits using Ethernet or 802.11 b/g wireless networks. netDimmer can be used stand-alone (AdHoc) with any tablet/iPad/iPhone/SmartPhone or attached wirelessly to a local router (infrastructure) for network control. netDimmer is also compatible with new MiFi cellular based devices, GPRS modems, and personal HotSpots for remote internet access within coverage areas.

A Built-in Server hosts Web pages that allow user control of any of the LED Light circuits. The netDimmer web

pages are completely customizable using the browser interface to match any installation. All positions can be custom labeled. Current switch state is constantly monitored and shown on the browser page. Up to 16 different units can be monitired and controlled.

New Generation-2 features allow the adapter to receive commands directly from netGauges.net<sup>™</sup> gateways over an existing Ethernet or wireless network connection. This advanced feature allows any netGauges Analog Sensor gateway to control LED Lighting Levels based on sensor detection thresholds. In addition, netDimmer can also receive commands from the HelmSmart Cloud service allowing for centralized control. The HelmSmart service can actively monitor 1000's of networked sensor signals and remotely adjust light output levels based on need.

When paired with a netGauges Analog Sensor Gateway, a complete stand-alone closed loop control system can be created. For example, ambient light detected by a netGauges



netDimmer driver options include multiple TRIAC, 0-10 Volt, and direct PWM circuits. TRIAC is ideal for existing 2-wire AC mains and can support up to three separate dimmable loads to 8 amps each. Direct 3 channel PWM options are available for 12-32 VDC and 120VDC LED lights up to 18 amps per circuit. Channels can be combined for RGB LED lights. PWM offers higher resolution control and the most efficient energy profiles. A 0-10V control option is also available for 4-wire lights.

The rugged water-resist design features 12-pin flying lead harness for secure connections and easy installation. A 4-pin twist-lock Conxall Mini connector provides the Ethernet interface with included mating 15' Cat5 patch cable. This design prevents cable engagement failures common with RJ45 connectors and provides enhanced environmental protection. A 5-pin Mico-C style CAN Bus/NMEA 2000 option is also available to network multiple dimmers as slave devices to a single master controller. Zigbee/Xbee mesh networking option provides wide area distribution of individual dimmer modules for campus and grid deployments.



Model Number	NDRMTRIAC	NDRMPWM	NDRMVC	NDRMZB
Dimmer Channels (control/slave)	3X2 @4 amps	3X3 @ 6 amps	6 @ 0-10VDC	1 @ 6 amps
Dimmer Output type	Forward Phase TRIAC 85-260 VAC	PWM @300 Hz 12/24/36VDC, 160VDC	0-10 VDC @ 25mA	PWM @300 Hz 12/24/36VDC, 160VDC
SD Memory Storage (removable)	4GB	4GB	4GB	
<ul> <li>Serial Port (RS232)/USB Port</li> <li>Supplied weather-resist USB - 2m</li> <li>Supplied PC Instrumentation S/W for live view</li> </ul>				
<ul> <li>Ethernet Port (10/100 Base-T)</li> <li>Supplied weather-resist RJ45 patch cable-3m</li> <li>5-pin micro Twist-lock connector</li> </ul>				*
<ul> <li>WiFi Port (802.11 b/g) 2.48 GHz</li> <li>Supplied 6" di-pole or Optional remote Antenna</li> <li>Range of 300'</li> </ul>				*
Zigbee/Xbee Mesh <ul> <li>Spans large area peer-to-peer</li> <li>Multi-node self configuring WiFi</li> </ul>				
CAN Bus/NMEA 2000 • 5-Pin Mico C • Self Powered via N2K cable		Ø		*
Embedded Web Server • Included Web Pages for live view				*
Network Protocols <ul> <li>TCP – Single Client</li> <li>UDP - Broadcast</li> </ul>		Ø		*
<ul><li>Remote Access via Internet</li><li>Direct Push to netGauges.net</li></ul>				*
Power Supply Supply Current	110-260 VAC 20 A	12V-160 VDC 20 A	110-260 VAC 1 A	110-260 VAC 6A
Enclosure Material Dimensions * Requires separate gateway – multiple o	Thermoplastic 6"X8"X2"	Thermoplastic 6"X8"X2"	Thermoplastic 6"X8"X2"	Thermoplastic 4"x2"x2"

\* Requires separate gateway – multiple dimmer modules are inter-connected via central gateway device

 $\blacksquare$  denotes product configuration option