Genesys Modular Stack allows for easy interconnection of expansion modules. Genesys Modular Stack compliant modules feature a characteristic pair of board-to-board feedthrough connectors ensuring that they are infinitely stackable with each module adding new functionality. The I/O Base Board is fully Genesys Modular Stack compatible and features receptacles to support any number of modules.

### I/O BASE BOARD

The Genesys I/O Base Board gives you a strong, low-cost platform to build your wired or wireless control network.

#### GREEN IN MORE THAN ONE WAY

We’re not just talking about the colour of the PCB, the I/O Base Board operates on a low 5V and consumes only 300mW of power at nominal full load.

#### FULLY FEATURED, FITS IN THE PALM OF YOUR HAND

The I/O Base Board has 2 A/D input and 2 D/A output channels along with 2 solid state relay outputs and 3 GPIO lines. This provides an excellent base for medium complexity control systems.

#### INFINITE EXPANSION, INFINITE POSSIBILITIES

Turning the I/O Base Board into a powerful processing and sensing platform is made simple with Genesys Modular Stack technology. Add on functionality such as GPS, Wi-Fi, 3G connectivity and many other features are added by simply stacking on additional modules.

### CHARACTERISTICS OVERVIEW

**DIMENSIONS**

50mm x 100mm

**CONNECTIVITY**

- Genesys Modular Stack dual 40-pin connector
- 2 A/D Input Channels 0 to 3V3
- 2 D/A Output Channels 0 to 3V3
- 2 Solid State Relay Outputs 30V 1.2A
- 3 GPIO lines 0 to 3V3
- 2 RS-485 capable ports
- USB serial port for PC/modem interface
CHARACTERISTICS

LOCAL WIRED NETWORK
- Transparent RS-485/422 to RS-485/422 data piping with full or half duplex capabilities
- Looping connector for multi-drop applications
- Power feed over RS-485/422 cable

I/O INTERFACES
- Protected External Connections:
  - 2 A/D input channels 0 to 3V3
  - 2 D/A output channels 0 to 3V3
  - 2 Solid State Relay outputs 30V 1.2A
  - 3 GPIO lines 0 to 3V3
  - Supply Output (200mA)
  - 3V3 Output (200mA)
- Genesys Modular Stack Dual 40-pin Connector:
  - 3V3 Power
  - 2 UARTs
  - Serial Peripheral Interface (SPI)
  - Inter-Integrated Circuit (I2C)
  - 6 Analogue/Digital Converters
  - Keyboard Interface
  - Timer/Counter IO
  - General Purpose Input/Outputs
  - JTAG Programmer

USB
- USB 2.0 Type-B Device Port

MEMORY
- 1Mb Serial EEPROM
- 2kb Serial EEPROM with Factory-Programmed EUI-48™ Address

USER INTERFACE
- Dual TX/RX indicator LEDs
- Dual status indicator LEDs
- Two user pushbuttons
- Reset button
- Remote monitoring and control via mobile app

PHYSICAL
- Dimensions: 50mm x 100 mm

ENVIRONMENTAL
- Temperature (operating): -15°C to +55°C
- Temperature (survival): -55°C to +85°C
- Humidity (operating): 95% RH at 50°C

POWER
- Input Power Connection:
  - 40mA (Nominal, 12V Input, in typical configuration with GBI-ML-200)
- Genesys Modular Stack 3V3 Power Load:
  - <20μA (Static)
  - <10mA (Dynamic)

MOUNTING DIMENSION DRAWING