

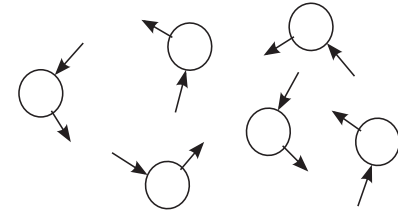
Introducing ANT BLAZE™ for High Node Count IoT Applications

ANT BLAZE is a connectionless mesh network technology for commercial and industrial high node count IoT monitoring and control applications in challenging environments:

- Robust ANT BLAZE networks of up to 500 nodes are self-forming and self-healing, providing ease of installation and maintenance when run either with or without a cloud connection.
- Reliable and enterprise-ready, ANT BLAZE acts as its own independent communications 'backbone', coexisting cleanly with on-premises IT infrastructures.
- ANT BLAZE runs on Dual-Protocol D52 ANT SoC Premium Modules; Developers can deploy ANT BLAZE networks that can be concurrently commissioned and accessed from tablets and phones using Bluetooth®.

The updated D52 ANT SoC Module Starter Kit (D52DK2) contains everything needed to begin developing with ANT®, ANT BLAZE and Bluetooth low energy technology. The newly released Extender Kit (D52EXT1) includes four battery powered nodes to enable ANT BLAZE IoT application development.

ANT BLAZE™



A connectionless mesh network for monitoring and control use cases that require large range capabilities with no special router nodes.

CONNECTIVITY FEATURES



connect multiple nodes in a noisy environment to a gateway



flexibility to co-exist with other ULP wireless solutions



operates with no interference or disruptions to/from IT infrastructures



robustness and concurrent operation in WiFi and BLE environments



high throughput (>50 bytes/s)

[THISISANT.COM](https://thisisant.com)

MODULE HARDWARE





- Integrated printed antenna
- On-board 32MHz and 20ppm 32.768 kHz crystal clocks
- Supply Voltage range:
 - 1.7V to 3.6V (D52QD2M4IA)
 - 1.71V to 3.6V (D52QD2M4IA-A)
- Operating temperature: Industrial (-40°C to +85°C)
- Up to 30 GPIOs (D52QD2M4IA), 24 GPIOs (D52QD2M4IA-A, D52CD2M8IA)
- Programmable output/channel from -20dBm to 4dBm
- RoHS compliant
- Layout compatible options with N5 M4, AP2, C7
- Excellent receiver sensitivity
 - 93dBm ANT mode (D52Q)
 - 96dBm BLE mode (D52Q)
- 1dBm resolution RSSI
- Total 512kB flash, 64kB RAM
- SPI, I2C and UART interface
- Onboard 3-axis MEMS accelerometer (D52QD2M4IA-A)
- 2 programmable interrupt pins
- Radio regulatory approval for major markets
- BLUETOOTH SIG qualification
- Pre-loaded with S212 ANT SoftDevice and Network Processor application

ANT® OPERATION

(when loaded with S212 or S332 SoftDevice)

- 79 selectable RF channels (2402 to 2480 MHz)
- Simple to complex network topologies: peer-to-peer, star, tree, star-to-star and more
- Broadcast, acknowledged, and burst data communication modes
- Built-in device search and pairing
- Built-in interference handling and radio coexistence management with application radio disable requests and application flash write/erase requests
- Enhanced ANT features
 - Supports up to 15 logical channels each with configurable channel periods (5.2ms - 2s)
 - Advanced burst data transfer modes (up to 60kbps)
 - Optional channel encryption mode (AES-128)
 - Supports up to 8 public, private and/or managed networks
 - Advanced power management features to optimize application power consumption including Event Filtering & Selective data updates
 - Asynchronous transmit channel
 - Fast channel initiation

D52 ANT PREMIUM MODULES SUPPORTING ANT BLAZE

	PART NUMBER	DESCRIPTION	ORDERING/PACKAGE INFO*	PART STATUS
	D52QPM4IA	20x20mm, 30GPIOs, 8 analog inputs	TRAY: 20pc in 4x5 tray REEL: 800pc on 13" tape and reel	Active
	PART NUMBER	DESCRIPTION	ORDERING/PACKAGE INFO*	PART STATUS
	D52QPM4IA-A	20x20mm, 24GPIOs, 5 analog inputs; onboard 3-axis MEMS accelerometer	TRAY: 20pc in 4x5 tray REEL: 800pc on 13" tape and reel	Active
	PART NUMBER	DESCRIPTION	ORDERING/PACKAGE INFO*	PART STATUS
	D52MPM8IA	14.0x9.8x2.0mm, 24GPIOs, 8 analog inputs	TRAY: 40pc in 8x5 tray REEL: 1500pc on 13" tape and reel	Active
	PART NUMBER	DESCRIPTION	ORDERING/PACKAGE INFO*	PART STATUS
	D52QSKM6IA-A	Mounted on a carrier board for starter kit & development use	TRAY: 10 pc on 150x165mm tray	Active

*Dynastream D52 ANT SoC Premium Modules are available in tray and tape and reel packaging
CONTACT SALES@DYNASTREAM.COM FOR PRICING AND MORE INFORMATION

BLUETOOTH® OPERATION*

(when loaded with the S332 SoftDevice)

- Bluetooth 4.2 compliant low energy single mode protocol stack suitable for Bluetooth low energy products
- Concurrent Central, Observer, Peripheral, and Broadcaster roles with up to:
 - Multiple connections as a central
 - One connection as a peripheral
 - Observer & Broadcaster
- Link layer
- L2CAP, ATT, and SM protocols
- GATT and GAP APIs
- GATT Client and Server

* Bluetooth only mode when loaded with the S132 SoftDevice