# efit

### A NEW ERA OF FITNESS MODULES

Designed with group fitness in mind, G.FIT is a turn-key solution featuring ANT+ and *Bluetooth*<sup>®</sup> low energy connectivity, reference code and an embedded fitness equipment library.

With advanced capabilities for group connectivity, such as the ability to support 50+ concurrent devices in highly congested RF environments, G.FIT is the technology fitness equipment manufacturers need to drive sales and maintain a competitive advantage.

Including modules and an SDK, the G.FIT solution features:

- Enhanced coexistence for group and class use cases
- ANT+ Heart Rate & FE-C device profile support
- *Bluetooth*<sup>®</sup> low energy Heart Rate Profile & Service; Fitness Machine Service
- Preloaded G.FIT Network Processor application with serial API

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- Field upgrades via serial or wireless connection
- RSSI and list-based sensor pairing
- Custom G.FIT application support using the G.FIT Library and SDK

The G.FIT SDK includes the G.FIT embedded library, a reference application, console simulator for Windows and sample applications for iOS and Garmin Connect IQ.



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#### IMPLEMENTATION OPTIONS





Create a single-controller solution by building a custom fitness equipment controller application incorporating G.FIT features using the G.FIT SDK

FITNESS EQUIPMENT CONSOLE

CUSTOM FITNESS EQUIPMENT CONTROLLER APP





PROTOCOLS

#### SDK

The G.FIT SDK includes components that allow fitness equipment manufacturers and gyms to tailor the experience they want with their gym equipment.





G.FIT FE controller reference code  $\mathbb{R}$ 



Sample peripheral applications for Garmin Connect IQ & iOS

MODULES









#### FITNESS EQUIPMENT MODULE FEATURES

SERIES		G.FIT		FIT2	FIT1e
Custom app Support		<b>v</b>			
Serial Connection	~			~	~
Pairing	List, RSSI based proximity			RSSI based proximity	AGC based proximity
NFC Compatible	~				
ANT					
ANT+ HR	~			~	~
ANT+ FE-C	~				
ANT+ FIT				~	~
Cust. ANT Channels	Up to 9			4	2
BLUETOOTH® LOW ENERG	ŝΥ				
BLE HR Central / Peripheral	<b>`</b>				
BLE Fit Machine Svc.	~				
Custom BLE Svc.	~				
CHARACTERISTICS					
EM HRM					~
Field Upgradable*	~				
Data burst rate (bps)	Up to 60k			Up to 20k	Up to 20k
Data encryption	AES-128				
Max. Tx power (dBm)	4			4	0
Supply Voltage (V)	1.7-3.6			2.0-3.6	3.0-10.0
Mounting	SMT pins & LGA pads			SMT Pins	Connector
MODELS	D52QGFM4IA	D52QGFM4IA-A	D52MGFM8IA	FIT2	FIT1e
Size (mm)	20x20x2.8	20x20x2.8	14x9.8x2.0	20x20x2.6	20x33x7.0
GPIO	Up to 30	Up to 24	Up to 24		
Analog IO	8	8	8		
3-axis MEMS accelerometer		~			

\*Using serial or wireless connection



