



# An Introduction to Private 5G Networks

A 2-day training course  
Private on-site courses available



## Courses Available Now

Demystify Private 5G, and  
obtain actionable,  
need-to-know knowledge

Learn through the context of  
real deployments

Register Interest now:

 [courses@neutralwireless.com](mailto:courses@neutralwireless.com)

- **5G Jargon-Busting**  
Explore the tech behind  
the acronyms
- **Public vs Private 5G**  
Learn the differences  
and strengths of each
- **The Need-to-Knows**  
Understand the equipment,  
terminology, licensing, and  
decision-making

 [www.neutralwireless.com](http://www.neutralwireless.com)

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spectrum. unleashed.

# An Introduction to Private 5G Networks

Private on-site courses available



## What's on the syllabus?

- An intro to mobile & wireless
- Private vs public 5G
- 3GPP standards and 5G SA / NSA
- Spectrum & frequency planning
- 5G cores, the edge and the cloud
- Roaming & neutral hosting
- Shared spectrum & 3GPP bands
- User equipment & modems
- 5G radios & key hardware components
- Use Case I – rural & city networks
- Use Case II – media & broadcasting
- Use Case III – stadiums & events
- 5G configuration & management
- Live private 5G SA demonstrations

## Customise your Course

All of our on-site courses can be customised to meet your requirements and target use-cases.

Tailor your learning by agreeing a custom syllabus, crafted to set you up for self-sufficiency.

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# Hands On Private 5G Usage Training

Available as a 2-day or 3-day course

Private on-site courses available



## Courses Available Now

- **Save time on troubleshooting**  
Learn how to tackle common deployment issues
- **Learn on your own equipment**  
Training can be bundled with Private 5G network purchases
- **Customer-led education**  
Courses are tailored to customer-specific requirements

Learn key tips and tricks to streamline your deployments

Presented by experienced private 5G engineers

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Contact us for on-site courses

# Hands On

## Private 5G Usage Training

Private on-site courses available



### What's on the syllabus?

- Introduction to Private 5G
- The Neutral Wireless Etime radio and Ness/Nessie BBU & 5G Core
- Key equipment and P5G network form factors
- Deployment considerations and spectrum licensing & regulations
- RF Planning, backhaul, and rigging
- Required connections and interfaces
- Step-by-step set-up walkthrough
- Network configuration and monitoring using nibOS
- Connecting user equipment (modems, handsets, encoders)
- Network troubleshooting
- Test runs – working to requirements
- Customer-led free-form testing & customer-specific considerations

### Book your training course

-  Delivered on premises at Neutral Wireless Labs, Glasgow, UK
-  or On-site at your company headquarters
-  Can be scheduled to coincide with P5G purchase collection

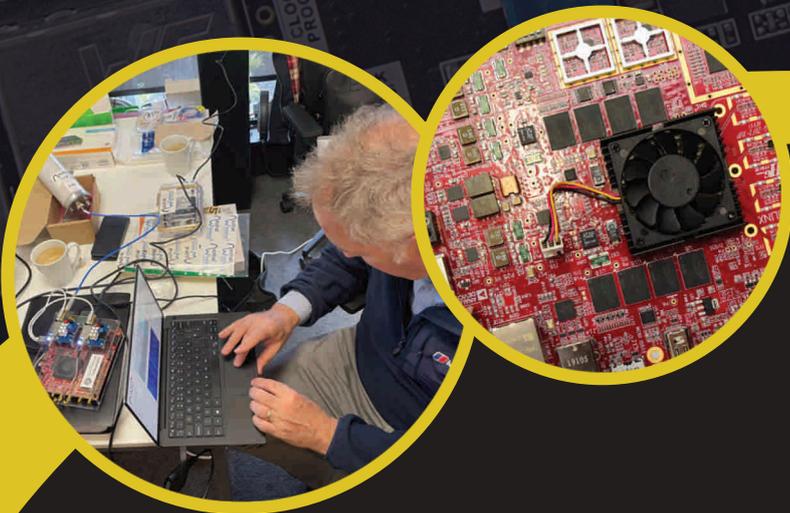
### Customise Your Course

### Build Private 5G workflows for your target use case

Additional T&S costs apply for on-site courses

# Designing SDR Systems with RFSoc - PYNQ

A 2-day training course  
Private on-site courses available



- **SDR Fundamentals**  
Digital radio systems & architectures
- **RFSoc Architecture**  
Explore RF Data Converters, PS/PL integration, and RFDC operation.
- **Design with Vivado & Pynq**  
Build radio transmit/receive chains
- **System Integration**  
Configure, control, and visualise SDR systems in real time

## Courses Available Now

Learn SDR design with  
AMD RFSoc and PYNQ

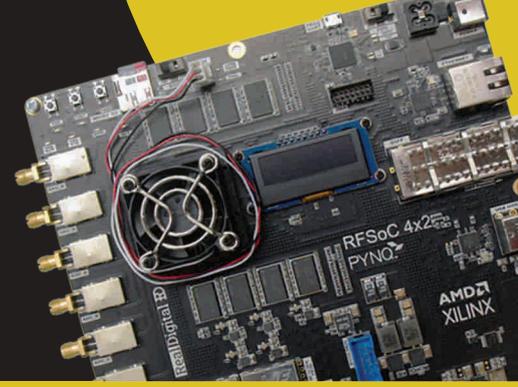
Combine theory with real  
RFSoc hardware

**Register Interest now:**

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# Designing SDR Systems with RFSoc-PYNQ

Private on-site courses available



## What's on the syllabus?

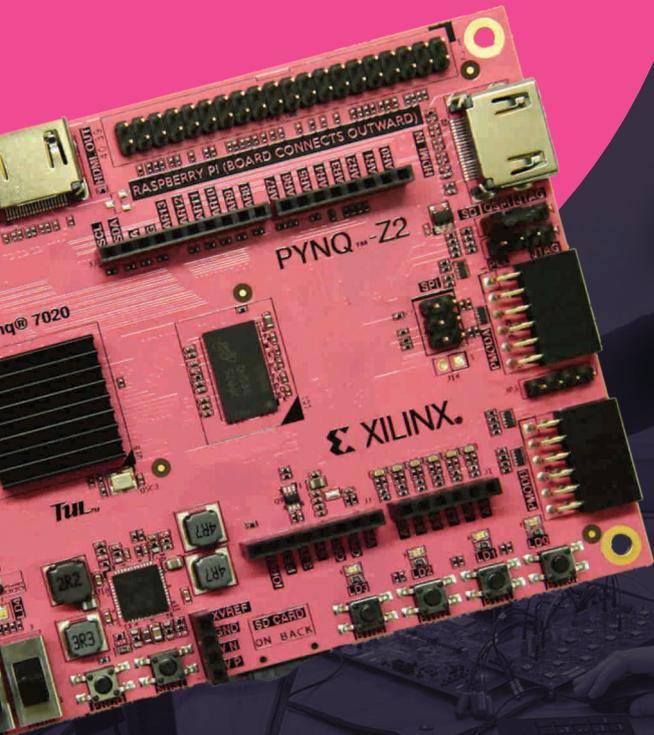
- Key concepts of software-defined radio and common architectures
- Baseband processing, FEC, and modulation/demodulation
- RFSoc devices and architectures
- Sampling rates & Nyquist zones
- Digital up and down conversion
- Modulation / demodulation theory
- RF data converters
- RFSoc hardware system design
- Clock and sample rate selection
- External components & interfacing
- RFDC drivers and PS / PL / RFDC data movement
- PYNQ Jupyter notebook development
- Practical design work and demos

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# An Introduction to PYNQ Development

A 2-day training course  
Private on-site courses available

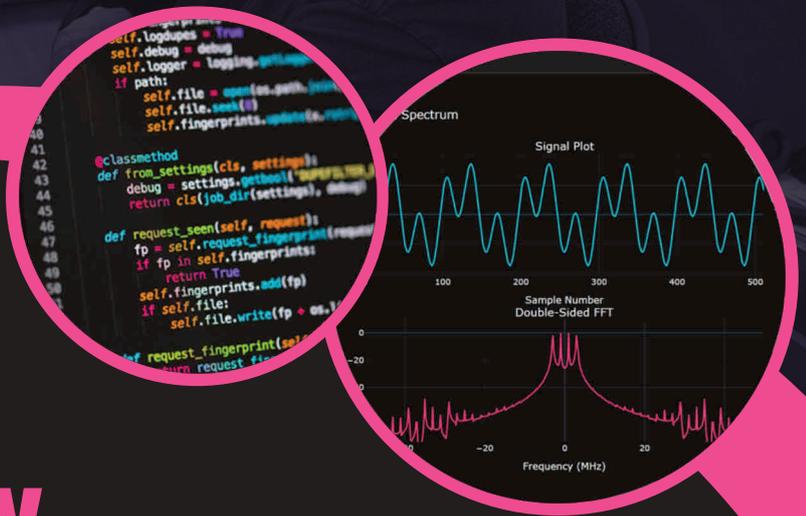
## Courses Available Now

Learn FPGA SoCs with PYNQ,  
from digital fundamentals to  
hands-on design.

A practical course combining  
focused lectures and  
interactive lab work.

Register now:

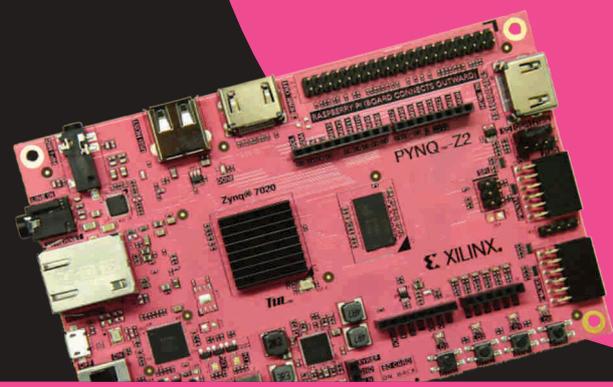
 [courses@neutralwireless.com](mailto:courses@neutralwireless.com)



- **Intro to SoC Architectures**  
FPGA system fundamentals
- **PYNQ & Jupyter**  
Interactive learning w/ live coding
- **PYNQ Design Flow**  
From low-level hardware to end applications
- **Custom IP Integration**  
Configure & control your own digital logic cores

# An Introduction to PYNQ Development

Private on-site courses available



## What's on the syllabus?

- Introduction to key PYNQ concepts devices, components and tools
- Basic architecture of FPGAs and SoCs
- FPGA logic & hardware acceleration
- Types of SoCs and their features
- The Jupyter environment – notebooks, labs, and other resources
- Data visualisation & dashboards
- Creating & packaging IP Cores
- Development tools & options
- External & internal interfacing
- PYNQ design flow – HW and SW design overview
- AXI interconnections & streaming
- Creation of custom drivers
- Includes various practical exercises

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